Telephony

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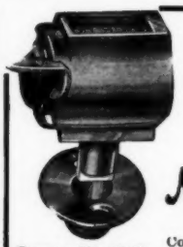

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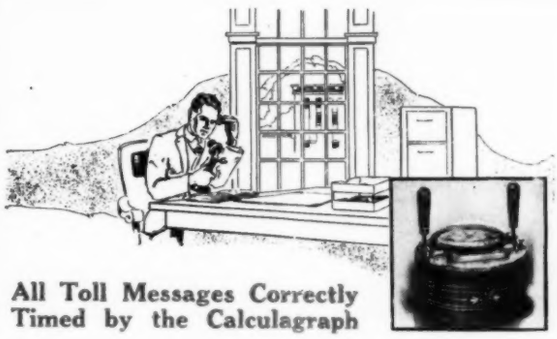

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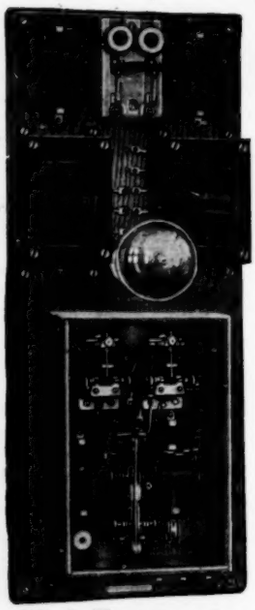

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Telephony.

THE AMERICAN TELEPHONE JOURNAL

Comprising Telephony, American Telephone Journal, Telephone Weekly, Telephone Magazine, Telephone Securities, The Telephone, Sound Waves

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Subscription—10 Cents a Copy
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SOME CHRISTMAS-TIME COMMENTS

With Christmas so near at hand it is a fitting time to call attention to a noticeable and remarkable development in business life which is causing much discussion. For lack of a better term, it may be called a spiritual awakening, a christianizing influence. If "peace on earth" is to be encouraged by the Washington arms conference, perhaps this trend in some business circles may bring "good will to men," so that both phrases of the Yuletide message will be realized. Success to both of them!

Many will be slow to believe that hard-headed business men put anything ahead of the dollar, but there are numerous signs that more than ever before they are doing that very thing right now.

Roger Babson, the industrial statistician, is preaching the adoption of the Golden Rule as the surest, quickest way to restore real prosperity. Already business concerns in different parts of the country are putting it into practice.

A Cincinnati clothing manufacturer, who runs his business on Golden Rule lines, has been getting wide publicity on that account, and, incidentally, has outgrown his factory capacity several times. His success, he says, is not because of the publicity, but because of the genuine benefits resulting from "doing unto others as you would they should do unto you."

* * * *

Just the other day the New York newspapers gave headlines to an article about the board of directors of the American Cast-Iron Pipe Co. passing resolutions embodying a platform that "the teachings of Jesus Christ are to be the ruling principles of the business."

Eight years ago the company established a large industrial Y. M. C. A. department in its own building, for the benefit of its employes, and ever since that time has been moving steadily along the path that ended in the declaration for a complete Golden Rule policy.

Another indication of the closer approach of Christianity to everyday life is the fact that many leading newspapers every day carry in a conspicuous place in their columns Bible verses to cheer and comfort those who need sympathy and encouragement—and who does not?

A chain of big city papers every Saturday publish a two-column article by Wm. J. Bryan on the Sunday school lesson of the next day. Underlying all these manifestations is the professed wish to serve mankind, and make life easier—and nobler—for the other fellow.

* * * *

The president of one of the largest insurance companies in the United States came to Chicago recently to meet several hundred agents and give them a talk on the company affairs and plans. It was an executive session and nothing was published about the event in the newspapers. No attempt was made to obtain publicity, for it was just a heart-to-heart talk by the big boss from New York to the men who represent the company among the people.

The keynote of his speech was service, and he urged upon his hearers that the most important thing they could do for the company was to help those they met from day to day—help them in their homes and on their jobs, train them in hygiene and health, inspire them to education and religion, and, in short, neglect no opportunity to make them useful, loyal American citizens with laudable ambitions to succeed in this life and earn a reward in the life to come. Social service was emphasized strongly by the speaker.

This insurance president put *service* above life policies and annual premiums, and persuaded his employes to believe that they are really missionaries, in a sense.

* * * *

No doubt there was shrewd business acumen back of such an appeal, for the speaker is a man who has won remarkable success in his chosen field. He probably knows full well that more service means more surplus for his company, for in the long run nobody ever lost anything by treating the other fellow kindly.

This insurance executive is old enough to know that dollars are not everything. Steadily increasing assets and a growing surplus are comfortable things to contemplate, but, unless they are accompanied by the good will of the people who contributed to them, they are chilly propositions—and often they do not last long. In fact, they are doomed to decay if they do not largely represent the respect and good will of the public whose patronage created them. Supported by that good

will, however, they will continue to increase.

* * * *

With the telephone company, service is the basic principle of enduring success. Like all utilities—but to a greater extent than most—the telephone industry has found it indispensable to win the good will of people by manifesting a constant disposition to serve them faithfully and efficiently, and especially in times of emergency.

The Nebraska State Railway Commission paid a deserved tribute to the telephone companies in this connection when it refused to order a reduction of rates because the proposed cut would mean a reduction of wages to faithful telephone employes. The commission said:

"Many employes of the company remained in service and did loyal work during the war period, notwithstanding much higher wages were paid for similar work by other industries. It would be a poor reward to these men for their faithful service to make substantial cuts in their wages at this time."

Press comment on this action has been favorable, and shows that real service—not telephone service, necessarily, but public service—is not always unappreciated.

* * * *

Of course, no one will claim that the millenium is very near, but it is, nevertheless, encouraging to consider the experiments with the Golden Rule in business and national life as cited in the foregoing. If they could be extended more generally, the wheels would move more smoothly, and many wrinkles of care would disappear.

For one thing, political demagogues would not harass and oppress utility corporations so grievously. As a matter of fact, we need the Golden Rule far more in politics than in business today, for business and industry have made strides in that direction, while, comparatively speaking, politics is still back in the dark ages.

If the day ever comes when the politician casts aside selfishness and makes a sincere effort to practice the Golden Rule, then, indeed, it will seem as though the millenium is in sight. Meanwhile we should be thankful that in other branches of American life there are earnest desires to serve others, and a courage to put them into actual practice.

* * * *

Proof that the idea of brotherhood in business and industry is receiving serious attention is furnished by the fact that in Chicago last week an assembly listened to a discussion of the question, which was led by a trade unionist and a prominent manufacturer. That the subject is being approached with open minds was shown by the fact the labor leader admitted that realization of the Golden Rule is delayed by the gross and blind selfishness which often dominates union officers.

Of course, the labor speaker did not fail to refer to employers who want to reduce wages and increase output at the same time. Still, the union man frankly declared the brotherhood idea was the only way to put an end to strikes, lockouts and violence.

The manufacturer was Arthur Nash, of Cincinnati, whose successful experience with Golden Rule principles has been mentioned, and he declared its beneficial working is as inevitable as the law of gravitation.

* * * *

It is natural, and yet a hopeful sign, that the public mind should turn to the Christian brotherhood idea at this time when the country is emerging from a business depression, and painful readjustments are still taking place.

When everything is booming, people generally are too careless to think much of the deeper things of life. They want lots of service—having money to buy it—but forget to give it to others. Honest application of the Golden Rule would cure that state of mind, anyhow.

* * * *

To "Telephony's" Subscribers: Unless the holiday mail delays deliveries, you should have this issue by Monday at the latest, in which case "Telephony's" staff wish you all a most Merry Christmas. At least, the thought is transmitted to you plenty early enough to make the message timely. Anyhow, we add sincere wishes for a Happy New Year, hoping that Nineteen-Twenty-two brings success and prosperity to all of the telephone fraternity.

Principles of Telephone Traffic

One of a Series of Articles Setting Forth the Fundamental Elementary Principles of Telephone Traffic Work—Every Operator and Manager Should Read These Articles—The Subscriber's Part in Maintaining Good Service

By E. L. Gaines

Traffic Superintendent, Home Telephone & Telegraph Co., Ft. Wayne, Ind.

Good telephone service is service that comes up to the expectations of the subscriber. Therefore, the subscriber should be taught what constitutes reasonably good service in order that he will not expect the unreasonable. Good service, insofar as the human element is concerned, depends upon the combined efforts of the employes of the telephone company and the efforts of the subscribers.

The subscriber's part is a most vital one and is a part that is often entirely overlooked by the telephone company. Just what it is necessary for the subscriber to do to enable him to get good service, and just what is necessary for him to know about his telephone and his telephone company, is a subject deserving a great deal of consideration.

In order to obtain from the subscriber the degree of co-operation necessary, educational advertising must be done by the telephone company in an effort to keep the subscribers and the public in general fully informed at all times.

The policy of telephone companies in the past has been largely wrong in this regard. Subscribers have been kept in the dark regarding the general affairs of the company as well as the actual operation of the plant. Many telephone companies have denied the general public access to their operating rooms and have endeavored to keep secret the business of the company.

This policy has caused many wrong impressions in the minds of the public. Many ideas of imaginary enormous profits in the business and crude business and operating practices have gained such a strong hold in the minds of the subscriber that years of well-directed publicity work

on the part of telephone companies will be required to rectify them.

Telephone companies have now generally adopted a new policy along this line and are endeavoring to educate their subscribers to the point where they will know what to expect in the way of service and proper charges for that service from the telephone company.

During the past few years, hundreds of companies have conducted extensive advertising campaigns along these lines with varying degrees of success. Perhaps one of the greatest reasons for a lack of success in these campaigns has been the fact that the advertising is done spasmodically by campaigns instead of continuously.

Someone has recently said that advertising is like shaving. A man may shave every day for ten years, but if he stops the effect is soon lost. We do not put on breathing campaigns or eating campaigns. We must do these things continuously to live, and so with an advertising campaign, it should be insistent, persistent and continuous in order to be effective.

The first and foremost point to be considered in all advertising is its truthfulness. The absolute truth must be told at all times. If a patron of the company reads what he knows to be an untruth in the company's advertising, he will thereafter refuse to believe the truthful advertisement. Money spent for untruthful advertising is worse than wasted.

The most effective form of educational advertising is the actual inspection of the telephone plant, including the operating rooms, by the public. Seeing is believing, and in the telephone office the subscriber must believe what he sees.

Regular days or regular hours each day should be set aside for "open house" to the public. Subscribers should not be allowed to go through the operating rooms unattended, but should always be accompanied by a company employe who is thoroughly qualified to explain the details of the operation of the switchboard.

It is often advisable to extend invitations to clubs and other similar organizations to visit the offices of the company in a body. Women's clubs are as important as the men's clubs and should not be overlooked.

Perhaps as important as any are the various organizations of children and young people such as the Boy Scouts, Campfire Girls and different school organizations. If the children are properly trained regarding the needs of the telephone company and the service requirements which the subscriber must meet, a solid foundation is laid upon which may be built an enormous amount of future good will for the company.

A telephone company has many natural opportunities for advertising peculiar to the business. The personal inspection of the plant by the public is one of the best. Perhaps the next is the company employe himself, or herself, who should be trained to take advantage of every opportunity to speak a good word for the company when needed and to explain the reasons for service faults and failures which are not apparent to the average subscriber. Employes, who are boosters, are among the company's most valuable assets and constitue one of its best advertisements.

The company's directory affords another excellent opportunity for advertising. Many telephone companies attempt to sell as much advertising space in their directories as possible and do not think enough of its advertising value to make use of it themselves.

The directory should contain explicit detailed instructions regarding the service and the subscriber's part in obtaining that service. Long distance rate tables and call classification outlines, together with the rates to a hundred or more stations most frequently called, should always be inserted in every directory.

Pictures of the telephone buildings and equipment may be used in the directory to good advantage as well as pictures of any particularly attractive portion, as employes' quarters, or any views of the equipment that may be of general interest to the public. These pictures should be changed in the various issues of the directory and thus not allowed to become stale. In taking the photographs, be sure to get some people in them. That adds human interest to the views as well as life and action.

The directory itself reflects the character of the company in its make-up.

Another excellent means of advertising, which is too frequently overlooked by the telephone company, is the opportunity afforded of sending information in the form of letter inserts to the subscribers with the statements of their accounts.

Direct mail advertising is unquestionably effective. Most companies mail statements to their subscribers every month. Attractive inserts placed in the envelopes with the statements cannot fail to attract favorable attention from the subscribers.

Any matter of general interest to all subscribers may be made the subject of letter inserts. Changes in rates or operating methods and practices are the more obvious of these. They should not be limited, however, to such matters alone. Booklets or pamphlets may be prepared on various telephone subjects of interest to the subscriber such as costs, toll charges and classifications and working conditions of employes, and used as letter inserts.

Seasonal greeting cards are always acceptable to subscribers and go a long way towards creating that good will which is so valuable to the company. The letter insert is the nearest thing to a personal letter that can be given in the form of advertising.

The average telephone company entirely neglects an excellent opportunity for advertising by failing to make use of its show windows, when such are available, and by not making use of any space in the lobby of its business office for advertising displays. Most telephone companies have windows that can be made use of for display purposes. If nothing more than a sign showing the actual number of telephones in service each day, the effort is well worth while.

The show window or the office lobby is an excellent place for a recording ammeter calibrated to read in calls per hour and connected to the main battery leads in such a manner that a chart of the daily traffic will be shown. An ordinary ammeter calibrated to read in the rate per hour at which calls are passing through the office at any given instant, is almost as effective as a recording ammeter and is less expensive. Various types of equipment furnished by the company at subscribers' stations, including intercommunicating and private branch exchange equipment, should be on display in the lobby. The average office lobby, if given a little thought, will make an excellent display room.

When it is necessary to advertise for operators, pictures of rest and lunchrooms and the operating rooms should be displayed in the office lobby with placards stating the needs of the company.

An invitation to the public to visit the operating rooms may be displayed near the pay windows in the collection department, where subscribers, who come to the office to pay their bills, may see it. An attendant should be provided to conduct visitors through the office. Many subscribers would like to visit the operating rooms but hesitate to take the initiative and ask permission to go through. Such invitations should designate certain hours for visitation which are most favorable.

Any property that the company owns is a standing advertisement for the company. If the property is well maintained, neat, and in good repair and in good working order at all times, it is a good advertisement. The telephone equipment on

TACT, TALENT AND HARD WORK.

When a worker has tact, it is a pretty good indication that he has character. When he has talent, it is a sign that he is keen mentally. When he is willing to work without kicks, it is a token that he is ambitious and finds more in the work than a mere job. The man who can combine tact with hard work can make up for a deficiency in talent, providing that he has some talent.—H. L. Hohlfeld, president, Hohlfeld Mfg. Co.

the premises of the subscriber can be made one of the best advertisements the company has if it is up-to-date and kept looking neat and in good working order.

The company's buildings should not be neglected but should be kept neat and clean and properly decorated both inside and out, and the company's name on a plain readable sign should always be displayed on each building. When possible, electric signs should be used at night. It is usually possible to judge the quality of service rendered in any telephone plant by inspecting the general condition of the company's property. Where offices and equipment are untidy and dilapidated, the service itself will usually be anything but good.

Since the coming of the automobile and the automobile truck, the majority of telephone companies have become owners of such conveyances as a means for carrying on their outside work. All cars and trucks should be kept clean and well-painted and should carry the company's name or emblem in neat, yet conspicuous, lettering. It is a fact that by far too many telephone trucks and trouble cars have more the appearance of a junk dealer's car than one owned by a prosperous corporation. This is a condition that is inexcusable.

The foregoing means of advertising take into consideration the opportunities for publicity which are peculiar to the telephone company. These are the more obvious of the company's opportunities, and to take advantage of them will bring the greatest results at the least cost.

Advertising should not stop here, however. No advertising campaign is complete unless combined with well-directed newspaper publicity. The local papers should be made use of and should carry a liberal amount of paid advertising. Even more important than paid advertising is publicity in the local papers in the form of news.

The public should be told, through the newspapers, of everything the telephone company is doing. Every new piece of construction work that is started or completed deserves a news story. Every change in equipment or in methods of operating or in the personnel of the organization, should be given to the newspapers who are always glad to give such matter proper space. In fairness to the newspaper man, it must be remembered that news and not propaganda receives free space in the newspaper and all publicity articles must have real news value.

The general nature of all telephone advertising should be educational regardless of what means are used to convey the ideas to the subscriber. The average telephone subscriber knows too little about the affairs of the telephone company to appreciate its problems and to co-operate with it to any great extent. Many subscribers do not know enough of the methods of handling calls and the use of the equipment to enable them to use the service intelligently. Well-directed publicity is the only means of educating the subscriber to the point where he will do his part in securing satisfactory telephone service.

WHEN THE SHADOWS FALL.

By Miss Anne Barnes,

Traveling Chief Operator, Iowa Independent Telephone Association, Des Moines, Iowa.

She was as neat as a new paper of pins, and the indelible impression she left in my memory was that of rows and rows of sharp penetrating points. In fact, she had built a fence around herself composed of hard, unrelenting virtues and had omitted a gateway of entrance. No one ever knew anything about her except what she told.

Most of the people we meet today have both good and bad points; but this individual never made mistakes, so you can imagine how perfectly miserable anyone would feel in her company, whether in business or pleasure association.

It may sound strange, but I have always liked people best who have some bad points, as they seem more human to me; besides they do not cause me to magnify my own deficiencies.

This every-pin-in-its-place operator greeted us each morning with one of those smiles which was not a part of her, but was just set on and easily tipped over, or straightened into a thin line.

The most remarkable thing about this individual was her absolute belief that she had no bad points among her rows and rows of shining points.

I have often thought, that if she should suddenly pass away, the reason would be that she was needed in Glory to become a shining example for the angels; while on earth she would always be an avenging angel with her pin-pricking points constantly jabbing mortals, thus keeping them on the defensive.

Could she be taught?—for that was my mission into her office.

You may judge for yourself from the following example of one of many fruitless efforts I made:

"Miss Every-Pin-In-Its-Place, will you handle your connections by the fibre part of the—"

"Miss Barnes," she interrupted, "I have a very good reason for handling my connections as I do, whether by the plugs, or pulling connections down by the cords. My first thought is service—rapid service to my patrons, which indeed they are entitled to, for they are paying for it. I will not sacrifice my patron's rights to save an insignficant plug."

The very plugs on the board seemed to shrink in size at this retort.

Rule D 63 B instruction on correct cord handling became full of jagged holes by the time she had finished; and I am afraid I entertained a secret wish that she were the rule in its last state.

When I was leaving, she said, "I am glad you came, Miss Barnes. I realize that the other operators have needed outside help for so long. I have tried to help them, but they have not paid any attention to my advice."

Some day this girl is going to become an old woman; an old, lonely, unloved woman; because she has never allowed herself to come out of herself and meet people who are just as human and full of mistakes as she thinks she is *not*. Today I feel a sorrow for her; in that inevitable day if she fails to see her error, I will feel a greater sorrow, for then it will be too late to change.

Paris Doctor Asks Damages for Directory Error.

Clients of Dr. Roux Delimal, of Paris, France, when telephoning him, found themselves invariably talking instead to the Chamber of Deputies, the reason being that the postal authorities put his number, which is 17, in the directory as 1770, which happens to be the number of the Palais Bourbon.

The doctor, although possibly recognizing that it was a great privilege for his clients to be able to converse with prominent politicians claims he lost a number of fees owing to this error and demands 25,000 francs damages.

The post office authorities, referring to ancient by-laws, disclaim all responsibility.

Purchase by Ohio Bell of Sandusky Properties Up to I. C. C.

The Ohio Bell Telephone Co. asked the Interstate Commerce Commission on December 13 for permission to purchase the property of the Sandusky Home Telephone Co., of Sandusky, Ohio.

Proposes Grouping Its Exchanges

Northwestern Bell Company Files Application with Nebraska Commission for Approval of Plan for Grouping Exchanges in State for Rate Purposes—Asks Continuance of Present Rates Until New Schedule Can be Considered

The Northwestern Bell Telephone Co. has filed with the Nebraska State Railway Commission a double-barreled application with respect to rates. It desires the commission to continue in effect until such time as a new rate schedule can be considered, the present rates, together with the 10 per cent surcharge.

Originally the company secured increases in a number of exchange rates, which, with toll rate readjustments, represented an addition of about 20 per cent to its income as compared with pre-war periods. These rates not being sufficiently remunerative, the commission granted it the right to add 10 per cent of each bill for exchange service. These latter rates are what it desires continued until its new plan, which contemplates a complete grouping of its 100 exchanges, can be carefully considered by the commission and public hearings held thereon. The present rates expire by limitation on December 31. The commission will hold a hearing on December 28 to determine if the conditions warrant continuance of these rates.

In support of its claim that these rates are not excessive, the company presents a financial showing which it says indicates that the returns are sufficient to pay only 4½ per cent on its actual investment. It adds that as money is now commanding 8 per cent for enterprises where such hazards exist as in its business, it will be unable to get money for the additions and betterments constantly demanded for the public service unless better earnings are shown.

The company claims a plant investment of close to 16 million dollars. It presents a statement covering the first ten months of the year, which shows exchange revenues of $2,753,000 and toll revenue of $956,000. Adding revenues from other sources, it had a gross income of $3,727,534. Out of this it paid operating expenses of $2,911,467, taxes of $252,585, rent of $35,648 and other items that left for interest and dividends $527,692, or 3.97 per cent on the investment.

The company divides, under its regrouping plan, all of its exchanges outside of Omaha into nine classifications, with the same rates governing the towns and cities in each. The classification is presumably made on the basis of stations, service area and expenses.

Omaha is divided into four zones, with different rates in each. There are also supplemental service and mileage schedules submitted. These include directory listings, incoming exchange lines and stations, loud ringing bells, and similar services. Private branch exchanges are divided into four classifications, cordless switchboard systems, non-multiple cord switchboard systems, multiple cord switchboard systems and push-button switching systems, with different rates for each.

Officials of the company informed the commission that, considered altogether, the revenues of the company will not be materially changed by the adoption of the classification system. Comparisons of some of the rates show a tendency to slightly increase business rates and to either slightly reduce residence service or leave it as it is, with the 10 per cent surcharge added.

Farm rates will be reduced by the adoption of a plan of eliminating the fractions and making all rates on the basis of the lower multiple of five. Thus, where the application of the 10 per cent surcharge makes a rate of $1.37½, the new rate will be $1.35.

The groupings are as follows:

Group A: Antioch, Belmont, Bennington, Big Springs, Bristow, Brule, Butte, Cody, Crookston, Haigler, Harrison, Homer, Lakeside, Potter, Rockville, Rogers and Whitney—17.

Group B: Allen, Ashton, Atkinson, Bridgeport, Clarkson, Dakota City, Decatur, Elm Creek, Elwood, Emerson, Farnam, Gretna, Howells, Laurel, Litchfield, Mason City, Millard, Ogallala, Overton, Oxford, Papillion, Pender, Pilger, Rushville, Silver Creek, Spencer, Springfield, Stratton, Stuart, Trenton, Wakefield, Waterbury and Winside—33.

Group C: Belgrade, Cedar Rapids, Cornlea, Elkhorn, Humphrey, Kimball, Long Pine, Lyons, Oakland, O'Neill, Primrose, Randolph, Spalding, Valley, Waterloo and Wood River—16.

Group D-1: Gothenburg—1.

Group D-2: Blair—1.

Group D-3: Axtell, Boelus, Broken Bow, Central City, Crawford, Cushing, Dannebrog, Elba, Farwell, Fullerton, Gordon, Lexington, Loup City, Minden, St. Paul, Schuyler, Tekamah, Valentine, Wayne and West Point—20.

Group E: Atlanta, Aliance, Chadron, Culbertson, Holdrege, Loomis and McCook—7.

Group F: Fremont, Norfolk and North Platte—3.

Group G: Alda, Doniphan, Cairo, Grand Island and St. Libory, making up the Grand Island zone service.

Omaha is divided into four zones, with varying rates. In some instances, where smaller towns are included in groups with larger ones, this includes zone service as now given.

Groups	Bus. 1	Bus. 2	Bus. 4	Res. 1	Res. 2	Res. 4	Res. Pty.
A	$3.00	$....	$....	$1.75	$....	$....	$1.50
B	3.00	....	....	2.00	....	....	1.75
C	3.25	3.00	....	2.00	....	....	1.75
D-1	2.50	....	....	1.50	1.25	....	....
D-2	3.25	2.75	2.25	1.50	1.50	1.00	....
D-3	3.75	3.25	....	2.00	....	....	1.75
E	4.00	3.50	....	2.25	....	....	1.75
F	4.50	4.00	....	2.50	2.25	2.00	....
G	5.00	4.25	....	2.75	2.25	2.00	....
Omaha general zone	8.50	7.00	....	4.00	3.25	....	....
Omaha No. zone	7.50	6.00	....	3.50	2.75	....	....
Omaha So. zone	5.00	4.00	....	2.75	2.75	....	....
Omaha So. general zone	8.50	7.00	....	3.25	2.75	....	....

These rates are all net. There will be no change from the present discount practice of adding 25 cents a month where payment is not made in advance on dates named, except that service stations will be billed at an additional $1, which will be allowed as a prompt payment discount from annual charge if paid within the first two months of the annual billing period.

Farm-line rates will remain as at present, including the surcharge of 10 per cent, computed to the next lower multiple of five.

Service stations, or switching charges, will be $5 a year for the first three groups, $5.50 for D-1, no rate for D-2, $6.60 for Groups D-3, E, F and G, and $10 for all four Omaha zones.

The towns are grouped as follows:

It is further provided that of the towns in D-3, Crawford, Valentine and Gordon will carry a residence 1 rate of $2.25, instead of the group rate of $2.

It is also stipulated that the present ratio between grounded and metallic rates on the same exchanges shall be preserved in the new readjustment.

Ohio Bell Telephone Co. Issues $5,000,000 Common Stock.

The Ohio Bell Telephone Co. has been given authority by the Ohio Public Utilities Commission to issue $5,000,000 worth of common stock and it is said the American Telephone & Telegraph Co. will purchase the entire issue.

Proceeds of this sale are to be used by the Ohio Bell in buying properties in Ohio owned by the Chesapeake & Potomac Telephone Co., of West Virginia.

Telephone Rate Standardization

Report of an Investigation of Practicability of Standardizing of Telephone Rates Made by Engineering Experiment Station, Ohio University—Presented at Meeting of U. S. Independent Telephone Association—Final Installment

By C. A. Wright and D. B. Judd

Effects of Bargaining and Competition.

In some communities the telephone company may be able, by ability to bargain which is above the average, to gain the advantage of fixing the rates, while the community may gain the advantage in other cases. Monopoly or unfair influence, the disposition to profiteer, the value of the telephone to the subscribers, and the ability of the subscribers to pay fair rates, all affect the rates, sometimes to the advantage of the company and sometimes to its disadvantage.

If a sufficient number of cases are considered the advantage will be on the side of the telephone company as often as it is against it, and the average curve may be assumed to be independent of inequalities in bargaining power. In towns where there are competing telephone companies the bargaining power of the companies is greatly decreased and the rates are consequently low. In such cases the value of the telephone service is also decreased and the companies probably pay rates in proportion to the value of the service which they are receiving.

Closely associated with bargaining power are the effects of the character of the community and the grade of service it wants and is willing to buy. In some cases communities of the same size may have one an industrial population and the other a farming population, but this is not usual. Generally, these differences correspond to differences in the sizes of communities.

Usually the grade and amount of service demanded varies regularly with the sizes of communities, very rapidly for smaller communities, and more gradually for the large communities. Insofar as such conditions are concerned, then it may be assumed that the average rate is the fair rate for communities of the size under consideration.

If the plant and traffic conditions with which a telephone company has to contend, and over which it has no control, are such as to make the investment and production costs, the sum of which are the total cost of producing the service, higher or lower than the average, the telephone rates should be correspondingly higher or lower than the average. If also the service is very good or very poor, the compensation of the telephone company for that service should be correspondingly high or low.

Bonuses or penalties should be applied to the average rates to give rates which are just to individual telephone companies and the communities they serve. These bonuses or penalties applied inversely to the rates of individual telephone companies should give the average rates.

The value of this rate standardization plan depends upon the possibility of obtaining bonuses and penalties which may be weighted properly and fairly, and which may be evaluated for individual cases without the expense and inconvenience of the present method of evaluating telephone plants, and which will take account of abnormal plant and service conditions. If incidentally these bonuses and penalties are closely associated with the elements of service given the subscribers and emphasize good service, the value of the rate standardization plan in encouraging good service will be great.

Unusually high plant and operating costs, which are not the fault of the management, peculiar characteristics of the community which make it difficult to give service, and other natural obstacles with which a company has to contend are one natural basis for bonuses or penalties.

The service given is the other basis which should be recognized. Good or poor service may be recognized by analyzing service, weighting its various elements more or less arbitrarily according to the judgment of representatives of the telephone companies and the public, and comparing the elements of service of the individual companies with those weighted elements; or by the results of good or poor service as shown by the telephone development in a community, and the average use made of the telephone by the subscribers. The latter basis for judging service is probably the best.

An evaluation of service by any analysis of service from its elements would set up a standard which would not develop as service conditions change. It would be too rigid and inelastic. The various elements of service would have to be arbitrarily weighted by representatives of the various interests concerned. Such a method would afford much opportunity for discussion, both in preparing a standard table of weighted elements of service and in applying it to individual cases.

It may be seen that the attempted use of such a method of recognizing the degree of excellence of service would result in much friction. Table 1 shows various elements of service to be considered.

Adequate Telephone Plant	Good Telephone Transmission	Loudness Quality Freedom from interference Education of public in regard to necessity for good equipment.
	Adequate Facilities	
	Simplicity of Substation Equipment.	
	Reliability of Equipment	
	Safety	
	Permanence	
Effective Telephone Operation	Accuracy	
	Continuity of Service and Reliability of Operation	
	Speed	
	Assurance of Attention	
	Courtesy and Form	
	Secrecy	
	Service Inspection	
	Education of Public in Regard to the Use of Telephone	
Good Management	Business Methods	Accuracy Promptness Simplicity
	Financial Policy	Adequate depreciation reserve Adequate surplus Adequate rates Proper control of securities
	Care and Training of Employees	
	Citizenship	Progressiveness Appearance of plant Regard for rights of public Local interest and coöperation
	Publicity	Condition of plant Methods of operation Service objectives and results obtained Reasons for rates

Table 1. Analysis of Telephone Service.

It may be contended that assigning bonuses and penalties on the basis of these elements of service would be more direct and for that reason more satisfactory. Attention might be directed to cases which will undoubtedly occur in which there will be injustice done to telephone companies as, for example, those of communities where the provision of a high grade of service has not been followed by high development or a high average calling rate.

Although it might be practicable to apply bonuses or penalties based on plant and operation elements of service, the results of good management are much more intangible, and it would be difficult to weight and apply the corresponding element of service directly. The condition of unfairness suggested is more likely to exist temporarily after the provision of the high grade service than permanently, unless the telephone company has used poor judgment in providing a better grade of service than the community desires. In such a case the telephone company would not deserve a bonus.

In justification of the use of development and average use of the telephone by subscribers, as bonus and penalty bases, it may be suggested that it makes necessary the use of only a few bases for service bonuses and penalties, thereby avoiding the complicated process of weighting service which would result from assigning bonuses and penalties on the basis of service elements, that the conditions which would warrant bonuses and penalties would be easily obtainable, and that development and average calling rate show the final result of good or poor service. It is the result in which we are interested rather than the factors which produce the result.

Plant Cost.

The cost of central office equipment should generally not vary greatly from the average for each group of telephone companies operating the same number of stations. If there is any difference, it would probably result from a difference in the maximum calling rate or peak load demand upon the telephone exchange. Exceptions which occur are cases where common battery and magneto exchanges serve communities of the same size.

In an investigation of one large group of telephone companies, "Group 1" of the Ohio telephone companies, it was found that the point of change on the station-rate curve from magneto to common battery switchboards is fairly sharp and definite at 1,000 stations.

If average curves are platted separately for the magneto and common battery stations a discontinuity in the curve at the point of change may reasonably be expected. If the curves are prolonged at the point of discontinuity so that they will overlap, as in Fig. 10, they might well show what additional rate a common battery exchange in a magneto group should be allowed, or what should be the decrease in the rate of a magneto exchange in a common battery group. This difference would, of course, be due to the difference in value of the two kinds of service as well as to the difference in cost.

In the case of Group 1 of the Ohio telephone companies, the two curves were continuous, indicating that in this case there is no difference in cost and value. The same reasoning might be applied to ringing equipment, but in this case also there were no discontinuities, indicating that the differences in rates due to ringing equipment are not important.

There is a considerable amount of variation in the cost of outside plant, within groups of companies operating the same numbers of stations, due to area served and unusual construction difficulties. Miles of pole line per station, or number of poles per station, preferably the former, may be taken as a measure of the area served, and as a basis for a bonus, or penalty.

It should not be necessary to consider variation within groups, due to the proportion of outside plant which is underground, as cables are not laid in conduits except in the larger communities, and this investigation includes only the smaller communities.

Among the possible unusual construction difficulties may be mentioned the character of the ground. The cost of extending lines through a hilly and rocky country is, of course, greater than through a country where the ground is easily workable. It often happens that in cases where the cost of construction is greatest, the people are least able to pay adequate telephone rates as, for example, in a rocky and barren country, where it is difficult to farm successfully and difficult to construct lines.

Maximum busy-hour load or maximum calling rate may also be taken as a cost bonus or penalty, independent of the average calls per station which is later suggested as a value bonus or penalty. An approximate measure of this factor is the maximum number of operator's positions in use, but it is not as desirable as the maximum busy-hour load as determined by a peg count, because it is not independent of the efficiency of operation of the telephone plant.

In the evaluation of bonuses and penalties in this report, both cost and value elements are cared for by one bonus or penalty which is determined by the average calls per station. This will result in a bonus or penalty which is approximately the sum of the two bonuses or penalties obtained by considering the cost and value factors separately.

If maximum busy-hour load were used as a basis for a bonus or penalty, it should not be difficult for public utility commissions to induce the telephone companies to inaugurate the use of peg counts in cases where it had not already been done.

A valuable element of telephone service is the assurance to the subscriber that the service will be continuous. The condition of the telephone plant in a large measure determines the extent of this assurance. It may in many cases be possible to estimate the condition of the plant from a statement of its age, and statements of depreciation reserve, and issues of stock and bonds. Accrued depreciation may be the basis for a penalty or a bonus.

If a plant is overbuilt to a reasonable extent, it would probably be just to allow a bonus. A plant should be overbuilt enough to make it possible to furnish service to new subscribers without delay. Records of applications and time necessary to furnish service might be used to

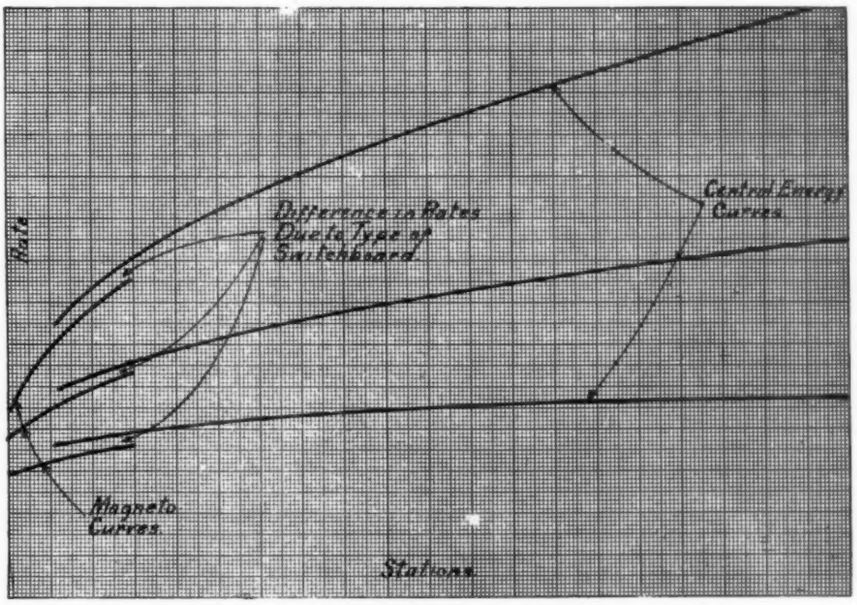

Fig. 10. Comparisons of Rates and Service.

advantage as an indication of the condition of the plant in this respect.

In this investigation, bonuses or penalties have not been allowed for plant condition or facilities. They may be considered to be included in development bonuses and penalties.

People will not subscribe to telephone service if they feel that it will deteriorate because the plant is not maintained, and they cannot subscribe to it unless there are adequate plant facilities. However, these elements of service are important and it may be possible that they should be the basis for a bonus or a penalty.

Telephone Service.

The average excellence of telephone service increases as the station-rate curve increases, but in each group of telephone exchanges serving the same number of stations there are individual exchanges to which bonuses or penalties are due because of the quality of their service.

The degree to which people buy telephone service, and the degree to which they use it, are approximate measures of the excellence of the service. The development in stations per thousand people shows not only how aggressive the management of a company has been in selling telephone service, but how good service is maintained, as the better the service, the easier it is to sell.

It may be difficult in the cases of small communities to ascertain how great a rural population might possibly be served by a telephone company. While not entirely satisfactory, the development within the town or city might be used as a measure of the total development. In the cases of the larger cities, the proportion of subscribers who are rural subscribers is small and will not affect the development to a great extent.

It is much less difficult to obtain the increase in stations in a community where the development is not high, than to obtain the additional stations in an already well-developed territory. Frequently the last subscribers obtained are the hardest to obtain.

It might be suggested that increasing the development is the same, so far as rates are concerned, as putting the exchange in a higher class, on the station-rate curve, but this is not true. The value element of the service indicated by the development for which a bonus or a penalty is given does not result from the number of stations served, which is taken account of by the position of the exchange on the station rate curve. It results from the higher grade of service produced.

Because the service in itself is better, and because the subscriber may if he desires obtain connection with a greater number of telephones, the telephone company in question can sell more telephone service, but the latter element of value is otherwise recognized, and the bonus should be applied only for the good service.

If development were used as a basis for a bonus or penalty, it would probably not be difficult for a public utility commission to obtain the population, the corresponding number of stations, and the development of each exchange area.

The provision of "free service" lines to neighboring towns has been recognized as having value to the subscribers, and public utility commissions have allowed increased rates because of free service. Free service has the same kind of value as increased development, but the value per given percentage of increase in subscribers with whom it is possible to get connection, is not as great as in the case of an increase in development.

There is not as free interchange of service over the free service lines as in the case of inter-office trunks in an urban exchange area, because it is less convenient to use the facilities provided for free service than to use those provided for normal local service and because there is less community interest among subscribers in neighboring communities than among those in the same community. The method followed in weighting free service was explained in the discussion of the curves of Figs. 2 to 9.

		Pole line			Calls per day			Development			Average weighted rate.			
No.	Working stations.	Miles of pole line.	Miles of pole line per working station.	Percentage variation of Column 3.	Number of calls per day.	Calls per day per working station.	Percentage variation of Column 6.	Population of exchange area calculated from population of exchange city.	Stations in exchange per thousand people in the exchange area.	Percentage variation of Column 9.	Gross operating income per month from local service.	Gross operating income per month per working station.	Percentage variation in Column 12.	No.
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1,804	72	.040	—47	9,330	5.16	3	6,700	269	18	$3,190	$1.77	— 5	1
2	2,956	175	.059	—21	28,500	9.66	93	13,400	220	— 4	5,590	1.89	1	2
3	3,099	279	.090	20	13,100	4.23	—16	16,600	187	—18	5,390	1.74	— 7	3
4	1,154	54	.047	—37	4,700	4.07	—19	5,350	216	— 6	2,145	1.86	— 1	4
5	1,375	77	.056	—25	5,100	3.72	—26	8,550	161	—30	2,390	1.74	— 7	5
6	2,331	125	.054	—28	4,880	2.10	—58	9,100	256	12	3,330	1.43	—24	6
7	1,713	162	.094	25	8,000	4.66	— 7	10,000	171	—25	3,820	2.23	19	7
8	1,550	103	.067	—11	11,200	7.23	44	5,200	298	30	2,540	1.64	—12	8
9	1,562	134	.086	15	.....	....	....	7,700	203	—11	3,110	1.99	6	9
10	2,309	131	.057	—24	13,300	5.76	15	9,200	251	10	4,160	1.80	— 4	10
11	1,977	52	.026	—65	8,830	4.46	—11	11,800	167	—27	3,100	1.57	—16	11
12	2,300	51	.022	—71	4,000	1.74	—65	9,600	240	5	4,450	1.93	3	12
13	1,620	94	.058	—23	33,300	20.56?	....	7,350	321	— 4	3,095	1.91	2	13
14	2,365	160	.067	—11	8,690	3.66	—27	8,500	278	21	4,220	1.78	— 5	14
15	2,748	240	.088	17	14,700	5.36	7	11,900	231	1	5,320	1.93	3	15
16	3,175	124	.039	—48	15,500	4 89	— 3	9,100	349	52	5,390	1.70	— 9	16
17	3,340	...	....	....	.....	....	....	15,600	214	— 7	5,890	1.76	— 6	17
18	3,265	532	.163	117	13,200	4.04	—20	15,500	211	— 8	6,960	2.13	14	18
19	2,327	287	.123	64	10,600	4.56	— 9	13,100	178	—22	5,270	2.26	21	19
20	3,590	480	.134	79	18,800	5.24	4	15,100	238	4	6,330	1.76	— 6	20
21	2,610	99	.038	—49	20,500	7.86	57	12,900	202	—12	5,280	2.02	8	21
22	2,000	235	.117	56	9,600	4.80	— 4	11,600	173	—24	5,020	2.51	34	22
23	1,138	32	.028	—63	6,000	5.27	5	5,900	193	—16	2,215	1.95	4	23
24	1,679	123	.073	— 3	4,710	2.81	—44	5,950	282	23	2,905	1.73	— 8	24
25	1,470	132	.090	20	.....	....	....	8,300	177	—23	2,480	1.69	—10	25
26	1,851	239	.129	72	9,700	5.24	4	9,900	187	—18	3,350	1.81	3	26
27	1,540	150	.097	29	.....	....	....	7,300	211	— 8	2,530	1.64	—12	27
28	1,603	98	.061	—19	7,900	4 93	— 2	5,500	292	28	3,365	2.10	12	28
29	1,595	195	.123	64	.....	....	....	3,500	455?	....	2,560	1.60	—14	29
30	1,501	57	.038	—49	6,760	4.50	—10	4,950	303	32	3.060	2.04	9	30
31	1,702	200	.117	56	5,430	3.19	—37	26,500	64?	....	2,570	1.51	—19	31
32	1,995	136	.068	— 9	12,300	6.17	23	7,700	259	13	3,700	1.85	— 1	32
33	2,539	211	.083	11	22,100	8.70	74	10,600	240	5	4,550	1.79	— 4	33
34	2,982	123	.041	—45	19,100	6.42	28	15,900	187	—18	6,750	2.26	21	34
35	1,085	87	.080	7	26,600	24.50?	....	3,800	286	25	2,090	1.93	3	35
Averages	.....	...	.075	38	.....	5.02	25	.....	229	17	.....	1.87	10	
		K1=.07					K2=.20						K3=.15	

Table 2.—Data and Deviations (1921) for Ohio Telephone Companies.

No.	Working stations.	Pole line: Miles of pole line.	Pole line: Miles of pole line per working station.	Pole line: Percentage variation of Column 3.	Calls per day: Number of calls per day.	Calls per day: Calls per day per working station.	Calls per day: Percentage variation of Column 6.	Development: Population in exchange city.	Development: Stations in exchange per thousand people in the exchange area.	Development: Percentage variation of Column 9.	Average weighted rate: Gross operating income per month from local service.	Average weighted rate: Gross operating income per month per working station.	Average weighted rate: Percentage variation in Column 12.	No.
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1,604	82	.051	—45	1,333?	.83?	....	7,804	206	—19	$2,420	$1.51	14	1
2	1,712	25?	.015?	....	8,580	5.00	—14	10,928	157	—38	2,035	1.19	—10	2
3	1,201	260	.216	132	7,500	6.25	8	5,212	230	— 9	1,659	1.38	— 5	3
4	2,509	274	.109	17	11,667	4.65	—20	8,191	307	21	3,790	1.51	14	4
5	1,035	99	.096	3	6,267	6.05	4	5,451	189	—26	1,672	1.62	23	5
6	2,674	122	.046	—51	145,925?	54.5?	....	8,116	329	29	3,405	1.27	— 4	6
7	1,418	166	.117	26	.....	....	....	3,000	472?	....	1,606	1.13	—14	7
8	1,002	198	.197	112	5,000	4.99	—14	2,275	440?	....	1,004	1.00	—24	8
9	1,765	202	.114	23	12,367	7.00	21	9,901	178	—30	2,590	1.46	11	9
10	1,378	128	.093	0	6,890	5.00	—14	4,168	331	30	1,642	1.19	—10	10
11	1,292	37	.029	—69	5,333	4.14	—29	4,758	272	7	1,271	.98	—26	11
12	1,638	234	.143	54	5,833	3.56	—39	5,958	276	9	2,021	1.23	— 7	12
13	1,312	173	.132	42	6,333	4.84	—16	3,720	353	39	1,525	1.16	—12	13
14	1,152	58	.050	—46	5,751	4.99	—14	4,507	255	0	1,369	1.18	—11	14
15	2,450	174	.071	—24	17,388	7.11	23	9,872	248	— 2	3,280	1.34	2	15
16	1,557	95	.061	—34	6,831	4.40	—24	5,478	284	12	2,021	1.30	— 2	16
17	1,131	7?	.006?	....	4,500	3.98	—31	4,511	251	— 1	1,095	.97	—26	17
18	2,775	232	.083	—11	15,419	5.57	— 4	5,362	518?	....	2,701	.98	—26	18
19	1,991	270	.136	46	7,571	3.79	—35	4,683	426?	....	2,469	1.24	— 6	19
20	2,190	161	.074	—20	8,033	3.66	—37	6,627	331	30	2,283	1.04	—21	20
21	2,076	166	.080	—14	10,052	4.84	—16	4,697	443?	....	2,433	1.17	—11	21
22	1,030	53	.052	—44	4,333	4.19	—28	5,776	179	—30	1,435	1.39	5	22
23	2,377	175	.074	—20	32,025	13.55	134	10,425	228	— 9	3,481	1.46	11	23
24	2,410	97	.040	—57	18,887	7.83	35	9,343	258	2	3,442	1.43	8	24
25	1,389	163	.117	26	7,869	5.67	— 2	8,876	156	—38	2,393	1.72	30	25
26	1,070	123	.115	24	2,500	2.34	—60	3,210	334	31	1,838	1.72	30	26
27	1,633	269	.165	77	21,667	13.30	129	5,642	279	10	2,855	1.75	32	27
28	2,472	238	.096	3	14,666	5.92	2	7,690	322	27	3,556	1.43	8	28
29	1,438	95	.066	—29	8,147	5 65	— 2	3,430	420?	....	1,921	1.33	1	29
30	1,045	36	.034	—63	13,129	12.55	116	4,294	243	— 4	1,488	1.42	8	30
31	2,070	132	.064	—31	10,000	4.83	—17	7,260	285	12	2,907	1.40	6	31
32	1,388	128	.092	— 1	6,435	4.63	—20	5,679	244	— 4	1,746	1.26	— 5	32
33	1,907	130	.068	—27	933?	.49?	....	8,100	236	— 7	2,695	1.41	7	33
34	1,329	87	.066	—29	6,143	4.62	—20	5,295	251	— 1	1,646	1.24	— 6	34
35	1,483	318?	.215?	....	6,660	4.48	—23	3,035	489?	....	1,760	1.18	—11	35
36	1,002	83	.082	—12	6,333	6.33	9	2,245	445?	....	1,377	1.37	4	36
37	1,373	88	.064	—31	12,000	8.75	51	8,451	163	—36	2,030	1.48	12	37
38	2,174	147	.068	—27	11,623	5.33	— 8	18,293	119	—53	3,055	1.41	7	38
39	1,520	876?	.576?	....	7,095	4.66	—20	4,353	349	37	1,525	1.00	—24	39
40	1,331	150	.112	20	7,571	5.69	— 2	5,582	238	— 6	1,794	1.35	2	40
41	1,039	180	.173	86	4,000	3.86	—33	2,997	348	37	1,533	1.48	12	41
42	1,157	42	.036	—61	7,900	6.83	18	6,654	174	—32	1,447	1.25	— 5	42
43	1,026	131	.128	38	6,400	6.23	7	3,929	261	3	1,356	1.32	0	43
44	1,118	325?	.290?	....	5,044	4.52	—22	4,466	251	— 1	1,464	1.31	— 1	44
Averages	.....	.....	.093	38	.....	5.79	28	.....	254	19	.....	1.32	12	
		K1=.08					K 2=.21					K3=.16		

Table 3.—Data and Deviations (1917) for Middle West Telephone Companies.

When there are two competing telephone exchanges in a community, the rates tend to decrease because of the competition, as has been mentioned, and incidentally the service is worth much less because of the competition. If rates were determined by modifying the average rate in accordance with development, the development of each exchange might be considered as either the total stations of the community divided by the total population (expressed in thousands) of that community, or stations of that exchange divided by the total population of the community.

In the latter case, which is probably the more just, the rates will be low because the development is low, and the rate of the new exchange will be the lower of the two if it has less stations than the other. In the other case, the development and, therefore, the rates will be high, as on account of the competition the development will be high.

Not only may the excellence of service be measured by the proportion of total population who buy telephone service, but also by the extent to which each subscriber uses his telephone. The number of calls per subscriber may be computed from the estimated number of calls per year, or if the distribution of calls throughout the day and year is regular and known, from the busy-hour calling rate.

A rough measure of the busy-hour calling rate is the number of operator's positions occupied, but, as suggested, this is not entirely satisfactory because it is not independent of the efficiency of the operating force or management, as is the calling rate. Even if the calling rate is low, the number of operator's positions occupied may be high because of inefficiency of operators or of the switchboard in use.

The busy-hour calling rate is more nearly a measure of the demand on the telephone exchange because it is approximately proportional to positions of the central office equipment and the number of operators employed, while an average calling rate per station is not so good a measure of the demand on the exchange but is probably a better measure of the satisfaction given the subscribers by the service.

Estimates of the average number of calls per month or per year are generally available, while very few of the smaller telephone companies have ever taken peg counts, which would show their busy-hour calling rates. However, if required by commissions, busy-hour calling rates could probably be obtained without great difficulty, and would generally be a more satisfactory means of measuring the use of the telephone by the subscriber than the estimates of numbers of calls.

Evaluating Bonuses and Penalties.

It is assumed in this report that the bases upon which bonuses and penalties should be granted are: (a) miles of pole line per station; (b) maximum busy-hour calling rate; (c) average calls per day per station; and (d) development. It is assumed further that these bonuses and penalty bases are so fundamental that they have been recognized and taken into account by public utility commissions, telephone companies and the telephone-using public, so that if their values are averaged in a sufficient number of cases in a sufficient number of states of the same general character, values will be obtained which are a measure of the average judgments of those organizations and people interested in the determination of telephone rates.

In this report, bonus and penalty bases

An Ideal of Service at a Lower Cost

LINCOLN'S EIGHTEEN E

Let the Experience of This m the Futu of

Eighteen years ago the Lincoln Telephone and Telegraph Company purchased a 3,000 line Strowger Automatic switchboard for their main exchange at Lincoln, Nebraska. From time to time since that date the original equipment has been augmented by additions of Strowger apparatus of the various latest types then available. Two months ago a new South Office, housing a 3,000 line Strowger switchboard of the type that is standard today with Automatic Electric Company, was placed in service.

These various types of equipment, representing eighteen years of development in Automatic telephony, are interconnected to form one smoothly working whole, and are operating faithfully, giving the same rapid, dependable and uniform service that is standard with Strowger Automatic exchanges being installed today.

Since beginning business in 1903 this Company has had a phenomenal growth, and is today recognized as being one of the most successful operating companies in the country.

AUTOMATIC EL

FACTORY AND GENERAL E

BRAN C

New York City
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Philadelphia
The Bourse Bldg.

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516 Ferris Bldg.

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International Automatic Telephone Company, Ltd., London

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The Telephone of the Present and Future

EARS OF AUTOMATIC

mpany Direct and Safeguard of Yours

Dozens of operating companies today are insuring future prosperity by beginning the installation of Strowger Automatic equipment. The future of these operating companies is written in the history of the Lincoln Company's experience.

Eighteen years ago the Lincoln Telephone and Telegraph Company ventured into the comparatively unexplored field of Automatic operation, and succeeded beyond expectation. The operating company that adopts Strowger Automatic today is backed by the experience and developments in manufacture and engineering, that the intervening years have brought.

Strowger Automatic equipment is not an experiment. It is an equipment whose value has been established by years of experience at Lincoln and at dozens of other exchanges whose records are similar.

Automatic Electric Company is ready at any time to help safeguard the future of ***your*** company by making studies of your exchanges without cost or obligation to you.

TRIC COMPANY

ES: CHICAGO, ILLINOIS

CES:

Rochester, Mercantile Bldg. | Detroit, 525 Ford Bldg. | Pittsburgh, 608 Fulton Bldg. | Kansas City, 1001 New York Life Bldg.

PANIES:

NEERING CORPORATION, New York

uston, Paris | Automatic Telephone Mfg. Co., Ltd., Liverpool | Automatic Telephones, Australasia, Ltd., Sydney

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b and c are combined into one cost and value bonus and penalty basis. The value obtained for this basis will be the sum of those which would be obtained if separate bases were assumed. Other bonuses and penalties—as for example, one for plant condition—may be added if desirable, without changing the methods of evaluation. The actual inconvenience and labor of the evaluation will, however, increase with the number of bonus and penalty bases assumed.

It is assumed that a deviation from the average for a telephone rate is accounted for by deviation from the average of pole line per station, average calls per day per station, and development, or

$$K_1P+K_2C+K_3D=R,$$

which we may call a deviation equation, where

P=percentage deviation from the average miles of pole line per station.

C=percentage deviation from the average calls per day per station.

D=percentage deviation from the average development.

R=percentage deviation from the average average weighted rate for exchange of the size in question.

K_1=percentage bonus or penalty per per cent of deviation from average miles of pole line per station.

K_2=percentage bonus or penalty per per cent of deviation from average average calls per day per station.

K_3=percentage bonus or penalty per per cent of deviation from average development.

This equation is not necessarily true for each individual case, but if the constants, K_1, K_2 and K_3 are evaluated for a large number of cases, the "just rates" for individual cases should agree with those obtained from the average rates modified in accordance with the deviation equation. The cases in which this is not so are probably those in which the effects of the bases for bonuses and penalties have not been recognized.

It can not be assumed that the constants should be the same for exchanges of all sizes so that the exchanges from which any set of constants are evaluated should all be of approximately the same size. In this report, exchanges operating from 1,000 to 3,000 stations were considered. If it were possible to obtain the necessary information in regard to a sufficient number of exchanges, including a smaller range of stations, the results would be more reliable.

Because of the difficulty of explaining what information was desired, and because the records examined were not intended to give this information, the information in regard to the bases for bonuses and penalties of many of the cases were insufficient or unreliable, and these cases had to be rejected, leaving too few cases to give reliable results. Several methods may be followed in evaluating the constants K_1, K_2 and K_3. They are as follows:

(1) Write the equations for the various individual cases using the unknown constants K_1, K_2 and K_3 for each case, but for each individual case using its own numerical value for P, C, D and R. Solve algebraically for the unknown K_1 K_2 and K_3 for each possible combination of three equations, and average the value of K_1, K_2 and K_3 obtained. This method is so laborious that it will probably be considered impracticable.

(2) Write the equations for the various individual cases as for (1). Then separate them into three equal groups, those with large positive rate deviations, R, in one group; those with large negative rate deviations in another group; and those with zero and small positive and negative rate deviations in the third group.

Obtain averages of miles of pole line per station, average calls per day per station, development, and rate deviations in each group without changing the signs of the negative deviations; and with the three sets of average values and K_1, K_2, and K_3 write three deviation equations, and solve for K_1, K_2 and K_3.

While this method is not laborious, it was not used in this report because the number of cases, small at the start, had to be separated into three groups, and average deviations obtained for each group, which would render the results unreliable. If a large number of cases is available, the results obtained by this method should be reliable.

(3) Change the signs of all negative deviations and obtain an average of the arithmetical values of the miles of pole line per station, average calls per day per station, development, and rate deviations of the whole group under consideration. The averages obtained are mean deviations from the average values for the whole group of deviations P, C, D, and R. Write an equation of these mean deviations and K_1, K_2, and K_3.

In order to solve the equation, assume that $K_1/K_2=C/P$, and $K_2/K_3=D/C$. This is equivalent to assuming that $K_1P=K_2C=K_3D$.

The justification for this assumption is

No.	Working stations.	Pole line: Miles of pole line.	Pole line: Miles of pole line per working station.	Pole line: Percentage variation of Column 3.	Calls per day: Number of calls per day.	Calls per day: Calls per day per working station.	Calls per day: Percentage variation of Column 6.	Development: Population of exchange area calculated from population of exchange city.	Development: Stations in exchange per thousand people in the exchange area.	Development: Percentage variation of Column 9.	Average weighted rate: Gross operating income per month from local service.	Average weighted rate: Gross operating income per month per working station.	Average weighted rate: Percentage variation in Column 12.	No.
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1,125	50	.044	—49	13,000	11.55	131	6,000	188	—15	.....	....	....	1
2	3,300	1,380	.418?	....	15,761	4.78	— 4	23,000	144	—35	.....	....	....	2
3	1,000	120	.120	40	10,517	10.52	110	4,200	238	8	$2,080	$2.08	20	3
4	1,415	185	.131	52	3,500	2.47	—51	5,500	258	17	2,162	1.53	—12	4
5	1,114	38	.024	—60	6,575	5.90	18	7,800	143	—35	2,150	1.93	11	5
6	1,303	89	.068	—21	8,456	6.49	30	6,000	217	— 1	2,671	2.05	—18	6
7	1,834	87	.047	—45	5,000	2.72	—45	10,900	168	—24	2,800	1.53	—12	7
8	2,900	185	.064	—26	15,000	5.17	3	15,600	186	—15	5,850	2.02	16	8
9	3,000	...	....	....	14,000	4.67	— 7	10,000	300	36	6,000	2.00	15	9
10	2,930	138	.047	—45	14,796	5.05	1	60,000?	49?	....	6,350	2.16	24	10
11	1,600	195	.122	42	6,500	4.06	—19	6,000	267	21	2,415	1.51	—13	11
12	900	160	.178	107	6,000	6.67	33	3,600	250	14	830?	....	....	12
13	1,700	175	.103	20	7,500	4.42	—12	8,000	212	— 4	3,500	2.06	18	13
14	1,025	140	.136	58	5,000	4.88	— 2	3,300	311	41	1,500	1.46	—16	14
15	2,303	273	.118	37	7,487	3.25	—35	7,100	324	52	3,300	1.43	—17	15
16	918	56	.061	—29	2,500	2.72	—46	3,850	238	8	1,810	1.97	13	16
17	1,999	89	.045	—48	10,880	5.45	9	6,500	308	40	3,410	1.71	— 2	17
18	1,531	110	.072	—16	6,500	4.25	—15	6,500	236	7	3,100	2.02	16	18
19	1,239	170	.137	59	4,270	3.45	—31	5,300	234	6	1,645	1.33	—24	19
20	1,566	52	.033	—62	8,000	5.11	2	7,400	212	— 4	2,760?	1.76?	1	20
21	1,369	269	.196	128	4,632	3.38	—32	8,400	163	—26	1,810?	1.32?	—24	21
22	1,050	25	.024	—72	3,152	3.00	—40	8,800	119	—46	1,550?	1.47?	—15	22
23	2,368	29	.012	—86	12,000	5.07	1	18,400	129	—41	3,510	1.48	—15	23
Averages	.....		.086	53	.....	5.00	30	.....	220	22	.....	1.74	15	
		K1=.07					K 2=.25					K3=.17		

Table 4.—Data and Deviations (1921) for Middle West Telephone Companies.

that if a bonus and penalty basis is unimportant, large deviations may be permitted by those who fix telephone rates with only small deviations in rates, so that the corresponding constant, which evaluates the percentage deviations of the bonus and penalty basis, should be small in proportion as the average percentage deviations permitted are large. The constants may be assumed to be roughly inversely proportional to the deviations which they evaluate.

This assumption is only an approximate one, but this method is used in this report because of the desirability of using all of the small number of cases available in order to make the averages more reliable than would be any of the three sets of averages each obtained from one third the total cases in the group. In this report, double importance must be attached to K_2C because C represents percentage deviation from average maximum busy-hour calls as well as percentage deviation from average average calls per station.

Tables 2, 3 and 4 show the method of deriving the percentages of deviation from the average from fundamental data. Table 2 shows the data and deviations for 36 exchanges in Ohio.

This information was obtained from records of the Ohio Public Utility Commission and the Bulletin on "Population of Ohio" of the "Fourteenth Census of the United States." The population of the territory served by the exchange, or the "exchange area" of the exchange was calculated by assuming that the populations of the exchange "city," and the whole "exchange area" are to each other as the stations in the exchange city and the total stations.

Table 3 shows the data and deviations for 44 exchanges in Ohio, Indiana, Illinois, Wisconsin and Iowa. These data were obtained from "Memorandum Concerning Telephone Companies and Telegraph Companies Reporting to the Interstate Commerce Commission for 1917," and bulletins on populations of the states under consideration of the "Fourteenth Census of the United States."

It was necessary in this case, because of lack of information in regard to division of stations between the exchange city and its surrounding exchange area, to use total stations and population of the city or town in obtaining development. There is probably very little error in the development obtained by this method for cities, but considerable error in the cases of small towns and villages.

Table 4 shows the data and deviations for 23 of the exchanges considered in Table 3. Letters were written to all of the exchanges of Table 3, requesting accurate information. Incidentally, this information afforded a means of checking the accuracy of the populations of the exchange areas as obtained for Table 2. Estimates of population of the exchange areas were requested, and the deviations based upon these estimates agree fairly well with those calculated by the method of Table 2.

The agreement of the constants K_1, K_2, and K_3, as calculated from these tables, is close. Although it is probably only by chance that such close agreement was obtained with the small numbers of cases considered, the results indicate that with sufficient data, reliable constants may be obtained. The values of constants obtained are:

	K_1	K_2	K_3
Table 2.....	.07	.20	.15
Table 3.....	.08	.21	.16
Table 4.....	.07	.25	.17

These values of the constants may be approximately checked by assuming a division of plant cost as three-fifths, one-fifth and one-fifth for outside plant, substation equipment, and central office equipment, which is a reasonable estimate for small telephone plants, and average percentages which the elements of production and investment expenses are of plant valuation, as traffic 8 per cent, maintenance 4.5 per cent, commercial 2.5 per cent, general 1.5 per cent, taxes 1.5 per cent, insurance 0.5 per cent, interest on investment, 8 per cent, and depreciation 7.5 per cent, and analyzing the effects on rates of variations in length of pole line per station, average calls per day per station, and development.

Such analyses will indicate that the constants should have somewhat larger values than those obtained, but the results are not definite enough to be conclusive.

Application of Rate Standardization Plan.

It will probably be necessary to apply this rate standardization plan to sections of the country which are homogeneous. Confusion might be caused by an attempt to apply the average rate curves and constants of one section to one of a widely different character. However, more just results might be obtained in some cases by considering a number of states of the same general character together rather than separately, as in this way a tendency of one public utility commission to be unfair to one or the other of the parties concerned might be balanced by an opposite tendency of another public utility commission.

It would be a desirable characteristic of this plan if it would adjust itself automatically to changing conditions. Unfortunately this would not be true during a period of rising or falling prices. If, for example, prices should generally rise, and the telephone rates were to remain stationary, service would rapidly deteriorate, and the result would be to decrease development and the use of the telephone per subscriber, rather than to increase them as would be desirable.

The public utility commissions could possibly forestall such conditions. By means of published price index numbers, they would be warned of conditions which would justify changes in the average rates for exchanges of various sizes, and analyses could be made by which the effect of changes in wages and costs of materials on operating expense could be determined. It should be noted that these adjustments could be made by groups of exchanges rather than individually, as under the present plan.

It might be suggested by some that the rates determined by this plan might be less than the cost of producing the service, but this is hardly likely. It must be remembered that the average rates and bonuses and penalties are averages of the judgments of public utility commissions, telephone companies and the telephone-using public in many cases.

When it has been attempted to impose rates upon telephone companies which would not cover the cost of giving the service, the tendency of the telephone companies has been to contest them strenuously because they have known that they could not accept such rates and continue to function, and the results have probably been such that the average rates will at least cover the cost of giving the service.

It should be noted that an advantage of this rate standardization plan is that its adoption would not result in any radical change in rates, as the average rates and bonuses and penalties are averages of those rates now in force.

There is a definite relation between numbers of stations served by exchanges and rates from which station-rate curves may be made. The average rates as shown by these curves will be just if bonuses and penalties are applied to take account of abnormal plant costs and plant conditions, development and calling rates. These factors may be determined without the inconvenience of valuations.

Summary.

The bonuses and penalties chosen will emphasize instead of cost of service the desirability of keeping the telephone plants in good condition and of improving service, and for that reason will react in a beneficial manner upon both the telephone companies and the public.

Telephone Concession for 30 Years in Northern Argentina.

United States Consul Wilbert L. Bonney, of Rosario, Argentina, reports that the minister of public works of Cordoba has granted a permit to the United River Plate Telephone Co. to extend its lines from Cordoba to Rio Cuarto, Dolores, San Francisco, and Cruz del Eje.

The concession is for 30 years and provides, in connection with the service to be rendered, that a 40 per cent discount over the commercial rate shall be given to the government authorities during the life of the concession.

"Telephony's" Home Study Course for Telephone Men

A Complete Presentation of the Principles Underlying Modern Telephony in All Its Branches—Arranged Systematically So That Regular Reading and Faithful Study Will Qualify Ambitious Men for Higher Positions—Prepared Under Supervision of Stanley R. Edwards—This Section Written by Jay G. Mitchell

Quiz Questions on the Preceding Installment.

1174. When is normally-open make contact 5, Fig. 322, closed by the rotation of the cam shaft of the ringing-control relay? What electrical effect is brought about by the closing of normally-open make contact 5? Explain what effect would result if the called line circuit voltage were not equalized with that of the common battery. How can the charge remaining in the called line, after the flow of ringing current is withdrawn, possibly be higher in voltage between conductors than the charge in the line due to the common battery? To which terminal of the common battery is the tip side of the connector circuit permanently connected? Explain why the line charge must be equalized through normally-open make contact 5 instead of through the winding of current supply relay *A*.

1175. What follows the opening or normally-open make contact 5? When are normally-open make contacts 1 and 2 closed by the rotation of the cam shaft of ringing-control relay *J*? What is the operating function of normally-open make contacts 1 and 2? Trace the path followed by the current passing through the called telephone when its receiver is removed. To what relay in manually-operated telephone switchboard equipment may relay *A* be said to correspond? Will the same sequence of operations be followed until the called telephone receiver is removed from its hook or until the calling telephone receiver is replaced upon its hook?

1176. Through which windings is operating current supplied to the called telephone? When is relay *A* de-energized after having once been energized as a result of the completion of the connection? When relay *A*, following the completion of the connection, is released, what operating function is instantly accomplished? Trace the path taken by the current passing through the winding of release magnet *V*. When this circuit is completed, what is the operating condition which again interrupts the flow of current through the winding of release magnet *V*? When is relay *Z* de-energized? Under what other circumstances, other than the normal completion of the call, is release magnet *V* energized? When the called line circuit is busy, what electrical condition is encountered on the test-bank contacts of the called line by the test wipers 4 and 5?

CHAPTER XXXIII. Operating Combinations Including Switching (Continued).

1177. *A relay interrupter.*—The operation of relay *B*, Fig. 322, is at once followed by the operation of the ringing control relay *J*. This operation requires a flow of interrupted current through the winding of *J* and the source of such interrupted current should obviously be connected with the connector equipment circuit at a point on the wire between the normally-open make contact 8 and the normally-open make contact of slow-acting relay *G*. This connection is not shown in the drawing of Fig. 322 but its purpose will be understood by tracing the operating circuit through the winding of ringing control relay magnet *J*.

When relay *B* is operated, current

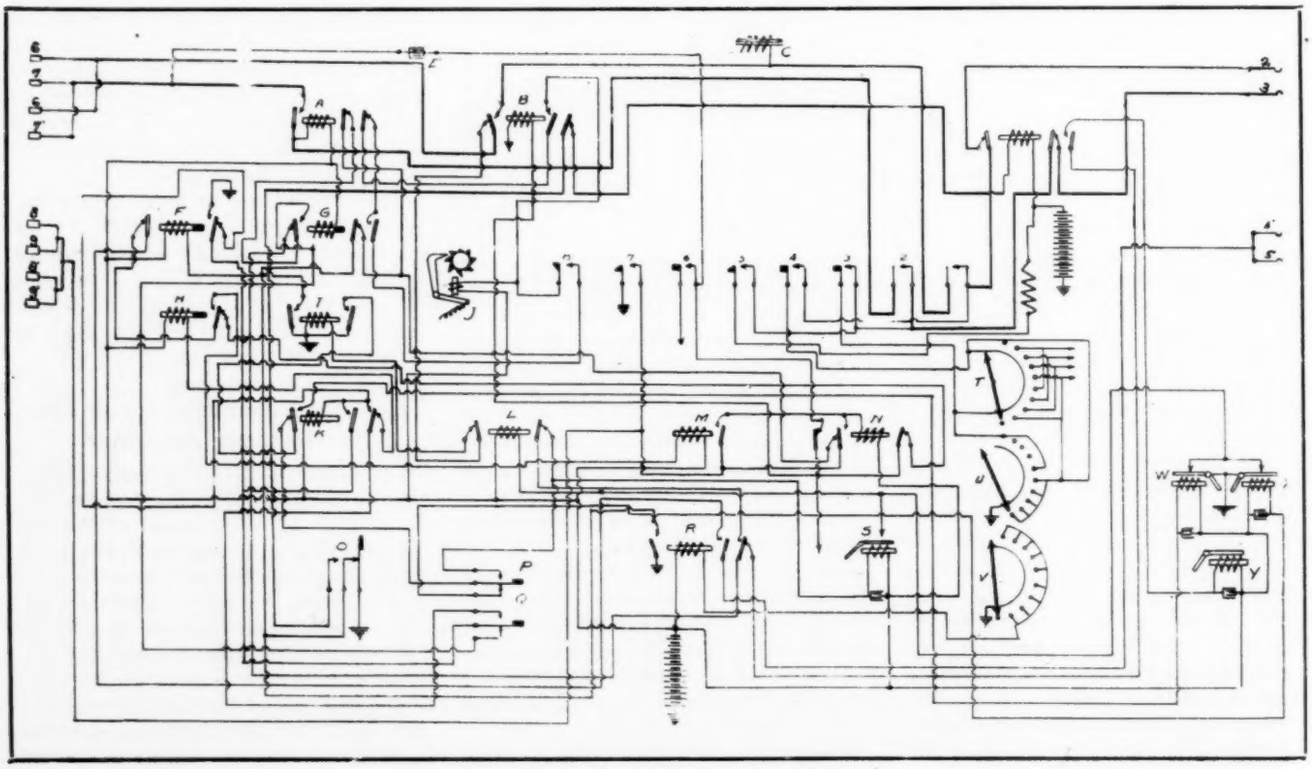

Fig. 322. Wiring of Connector Switch Equipment.

passes through the interrupter (not shown in Fig. 322) from the positive or grounded terminal of the common battery, through the normally-open make contact of slow-acting relay *G* (now closed), the normally-closed break contact of relay *A*, the normally-open make contact of relay *B* (now closed), the winding of ringing-control relay magnet *J* and the common battery.

This current is periodically interrupted and ringing-control relay magnet *J* is alternately energized and de-energized, a condition which will cause it to step the cam shaft, controlling the normally-open make contacts 1 to 8, ahead in the rotary sense until the flow of switch-driving current impulses is interrupted.

Any form of current interrupter could be used in this way but the manufacturers of the equipment in which the circuit shown is used have arranged a very compact form of relay interrupter which has sufficient current-carrying capacity to serve satisfactorily one group of connector equipments. In other words, one such interrupter may be mounted on the same framework as the connector equipments serving one group of lines and may be made common to all the connector equipments in such a group without operative difficulty. The circuit of such a relay interrupter is shown in Fig. 323. Its method of operation is as follows:

1178. *Operation of relay interrupter.*—When one or more relays *B*, Fig. 322, are operated, a circuit is completed through the interrupter equipment traceable as follows: Starting at the positive or grounded terminal of the common battery, the current flows through the winding of slow-acting relay *B'*, Fig. 323 (having a comparative high resistance), the normally-closed break contact of slow-acting relay *A'*, the common wire leading to normally-open make contact 8 and the normally-open make contact of slow acting relay *G* (both of Fig. 322), and thence through a circuit comprising the winding of ringing-control relay magnet *J*.

The strength of current passing through the winding of slow-acting relay *B'*, Fig. 323, is not sufficient, due to the resistance, to cause the operation of the ringing control relay *J*. The operation of slow-acting relay *B'*, however, completes a path through its normally-open contact and a circuit comprising the winding of ringing-control relay *J* which does not include the resistance of slow-acting relay *B'* and which permits sufficient current to pass to energize and operated the magnet *J*. At the same time, relay *B'*, Fig. 323, completes an obvious path for a flow of current through the winding of slow-acting relay *A'*.

When slow-acting relay *A'* is operated, it again interrupts the flow of current in the winding of slow-acting relay *B'*. Since relay *B'* is of the slow-acting type, its armature will be retained for a short time after slow-acting relay *A'* has been operated, and will then be released, interrupting the flow of current through the winding of ringing-control relay *J*, Fig. 322, and slow-acting relay *A'*, Fig. 323. Now relay *A'* being also of the slow-acting type, will retain its armature after the flow of current in its windings has been interrupted for a time. When the normally-closed break contact of slow-acting relay *A'* is finally restored to normal, the operation is at once repeated.

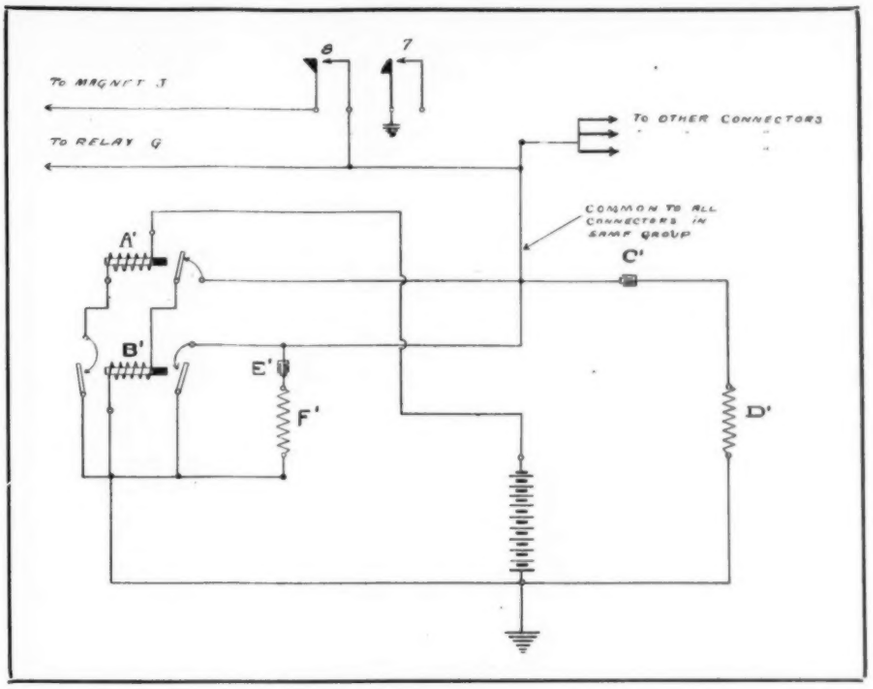

Fig. 323. Relay Type Interrupter.

The total effect is to send a stream of switch-driving current impulses through the winding of ringing-control relay magnet *J* until relay *A*, Fig. 322, is operated. But when relay *A*, Fig. 322, is operated, normally-open make contact 8 will have been completed by the rotation of the cam shaft of ringing-control relay *J* and will maintain a circuit, independently of the originally-established one through the contacts of relay *A* and slow-acting relay *G*, until the cam shaft of ringing-control relay *J* shall have reached its normal position again.

When the normal position of the cam shaft has been reached, normally-open make contact *A* is at once restored to normal, the energizing circuit of *J* is interrupted, and further rotation of the ringing-control relay cam shaft is stopped. In this way, normally-open contacts 1 to 8 are always restored to their normal condition.

1179. *The divided control.*—The removal of the called telephone receiver, by initiating the sequence of operations following the operation of relay *A*, places the control of the connector release within the power of the called station. In other words, the called line may be cleared and made available for another connection regardless of the release of portions of the trunking equipment involved in the connection between the calling line and the connector switch.

Since the completed talking circuit involves the two normally-open make contacts 1 and 2 (which must be closed during conversation), it is necessary that the rotation of the cam shaft of ringing-control relay *J* be continued when the called telephone receiver is lifted from its hook during the "ringing period." This is assured by the closing of normally-open make contact 8. The cam which controls this normally-open make contact is shaped so that the circuit through 8 is closed when the first step is taken by the cam shaft of the ringing control relay. When the called telephone receiver is removed from its hook during the "silent period," therefore, relay *A* is operated and interrupts the circuit over which current originally reached the winding of ringing-control relay magnet *J*. Regardless of this fact, the rotation of the cam shaft of the ringing-control relay is continued until the normal position of the contacts has been brought about. The reaching of this point is fixed by the shape of the cam operating normally-open make contact 8. This cam is shaped so that the springs of 8 are held in contact until the rotating cam shaft shall have reached the normal position when it permits contact 8 to be broken thereby interrupting the rotation of the cam shaft.

1180. *The completed release.*—When the connector switch wiper shaft has reached the normal position, the connection with the positive or grounded

terminal of the common battery at off-normal contact *O* is interrupted. This removes all connection between the test-bank contacts, 8 and 9, Fig. 322, and the positive or grounded terminal of the common battery.

In this way the connector equipment is made available for a succeeding call from an intermediate selector just as soon as the intermediate selector having its wipers resting on the bank contacts 6, 7, 8, and 9 is released and restored to normal.

(To be continued.)

British Telephone Subscribers Pay for Information Calls.

It has come as a shock to those telephone subscribers in England who have been in the habit of ringing up telephone exchanges to obtain the time or learn who was elected on the coalition ticket, to find that they must pay for such information.

To subscribers who ring up the exchange to learn if the operator can give them the correct time, the latter, in a pleasant voice, says: "With pleasure; it is exactly 11 o'clock. You know you are being charged with this call, don't you?" As a matter of fact, most of these subscribers did not know anything of the sort and they hang up hurriedly.

The telephone officials say that this habit of ringing up the exchanges for all manner of scraps of information of the character mentioned has grown so considerably that the calls must be charged for the same as ordinary telephone business calls. The operators are instructed to give the information if they know it.

What Is Your Company Doing?

Chats About Company's Doings.

By Stanley R. Edwards.

The vice-president and general manager of a company which has good relations both with its public and its employes believes in beginning the year right both with subscribers and with employes.

Here is a copy of a circular letter which will be mailed to each subscriber on January 1, 1922, with the quarterly rental bills:

Dear Subscriber:

What can we do to improve your telephone service or make it more valuable to you in 1922?

We are partners, so to speak—you and the Telephone Company. Our obligations are mutual—you need telephone service; the Telephone Company needs you as a patron.

It is up to the Telephone Company to furnish you good service—and it is up to you to see that the Company is paid a fair rate for that service.

You discharge an important part of your obligation when you pay your quarterly telephone bills.

Is the Company discharging its part of the obligation? A large majority of our subscribers answer "yes"—but what do you say?

We want to make 1922 a banner year in the history of this Telephone Company. We want to provide you and your neighbors with faultless telephone service. That's our aim and, with your co-operation, we shall attain our goal.

Occasionally we may make a slip—everybody does—but we want you to judge the service, not by the occasional annoying incident, but by its week-in and week-out performances.

If, at any time, you feel you are not being properly served, just tell us why, when and where we have fallen down, and we'll make every effort to rectify the defect—to make the service satisfactory to you.

We need your help, your co-operation, your encouragement. If your service is satisfactory, tell your neighbors, tell the world, but if we occasionally fall down, just whisper it to us.

The employes of the Telephone Company are human. They're constituted just like yourself and if they make a mistake, they don't like to hear it proclaimed from the house-tops—you know what we mean. On the other hand, if the service is excellent, don't forget that a little praise now and then is appreciated by the best of men—and women, too.

Yours for good service.

The employes are appealed to in a letter which each will receive on or about January 1. There are many things in this letter which employes of all telephone companies can read with profit and managers would do well to bring this letter or a similar one to their attention. The letter, which is sent to the home address of the employe, reads:

Dear Miss Johnson:

This is a personal appeal, and I am personally addressing it to every employe of the telephone company.

I am anxious, and I believe you are, to make the coming year the banner year in the history of the Jonesville Telephone Company.

To furnish Jonesville and vicinity with telephone service requires the combined efforts of one hundred forty people. You and I, therefore, are each one of the one hundred and forty cogs, so to speak, that together make the telephone wheel go 'round in Jonesville.

You depend upon the company for your monthly pay check, the same as I do. The company depends upon its subscribers for its pay check. Therefore, we are partners—the subscribers, you and I.

That being the case, it is up to us—you and me—to perform our part of the partnership fully, faithfully, carefully and cheerfully. The success of the company depends just as much upon you as it does upon me—our responsibility is mutual. What can we do—you and I—to make the service better and more popular in 1922?

For my part, I am going to try to do my work better than I did last year. I am going to be more courteous to the public, more careful, more accurate, more prompt and perform my part with a better spirit. I am going to try to radiate good will to the other employes and to the public. I am going to show those around me that I esteem it a privilege to live and to be in the best business in the world—the telephone business.

That is what I am going to try to do. Are you willing to try to do as much?

If you will make this endeavor—and I know you will—we shall have satisfied subscribers; we shall all be happier, and consequently we'll all live longer. Therefore, let us enter into our work in 1922 with a new spirit determined to do everything in our power to furnish the public what it is entitled to—the best telephone service possible.

Let us, for one thing, take the ground when we receive complaints—and we will receive them—that in every case the telephone subscriber is in the right and the company is in the wrong until the contrary is proved. Let us also do everything we can to please the "hard-to-please subscriber." We may think they are unreasonable—they may think we are. But anyhow, let us make them our friends. We can do it if we set out to. I am going to make it my business to please them. Will you do your part? I know you will.

Did you ever stop to think that a telephone company might have an excellent plant, the latest switchboard and equipment, and efficient operating and maintenance forces, and yet be a dismal failure because of the failure of the company to cultivate the good will of the public which it serves?

Good will is a valuable asset to any business, but vastly more to a public utility business. Good will is something that cannot be purchased with money. It can only be acquired by constant, persistent effort on the part of the employes—you and I included. Once secured, good will must be jealously guarded. Eternal vigilance is its price.

I believe we have the good will of this community. You have helped secure it, and it is up to you and me to see that it is retained. This can be done only by putting our very best efforts into our work. Let us do it in 1922. What do you say?

Very sincerely.

These two letters should do much towards stimulating interest in the telephone company. Of course, they will be followed up at proper intervals with other communications, or "progress bulletins," so that the public and employes will know that this particular company carries out its announced policies.

A recent long distance telephone conversation between Chicago and California resulted in the purchase of a site for another big Chicago skyscraper, the deal for the land alone involving $120,000. Murray Wolbach, who was in California, wanted the site, which was owned by Alfred S. Trude. Mr. Trude, talking from Chicago, threshed out details and concluded the bargain over the wire.

Sundry Snapshots Along the Trail

Observations and Comments, Pertinent and Otherwise On the Sunshine and Shadows of Telephone Work

By Well Clay

When the good old Yuletime comes
around,
As the year draws near its end,
And deep snow covers all the ground,
We think of each dear friend.

But the dearest friends we have in
mind
Are the ones we used to know,
And while new ones we yearly find,
They are not the ones of long ago.

We mean the friends of early days,
Before life's hill we started down;
That shared the sorrows and the joys
Of our little old home town.

We knew the troubles which beset,
Each cause which brought distress,
And shared the gladness which was
felt
When children came to bless.

Likewise, we grieved when sorrows
came,
Which time cannot efface,
When heart to wounded heart went out
With sympathetic love and grace.

It matters not if fortune smiled,
Or turned to you its frown,
We love you dear old friends the best
Who hail from our home town.

When scenes along the path you've
trod,
From back trails come thronging
down,
Remember us among your friends
Of the little old home town.

How dear to our hearts is the little old home town—after we have left it—and when we go back to it, how we look for every old familiar landmark and face we knew of yore. How good it seems to get back to the quiet backwaters—if we go back from a city life—and how restful to our tired nerves, for a day. After seeing

"You Stand About the Stove at the Village Store and Imagine You Are Enjoying Yourself."

the old faces and the old places once, we are ready, as a usual thing, to start on the back trail to the bright lights.

If you have not spent a night for some years in the lantern belt, it will seem pretty spooky to you to go poking 'round in the dark after supper on your way "uptown" to get the mail or to see the old friends who still gather of an evening about the stove at "the store." You miss the street lights, the pavements and the noise, tremendously, and you begin to think that after all the life in the city has its compensations, even if it is hard on the nerves at times.

You stand about the stove at the village store and imagine you are enjoying yourself, but it seems so dull to you that presently you begin to cast about for an excuse to start back to the place where you are to spend the night.

In the old days, the leisurely barter of eggs and butter for store things was full of interest to you because you moved in that circle yourself and you knew all the sidelights which usually illuminated the transactions, but tonight you don't feel interested in the prosy deals on which you look down from your superior height, as a city dweller, because somehow it seems all so foreign and unlike what it used to be. The little village store seems to be a million miles from the city and a dark void of a whole night and a day begins to loom up in your mind before you can get back to the brilliant streets.

You are homesick, in a way, until all at once the telephone rings. There never was a telephone in the store of your remembrance; was not dreamed of as within the reach of small towns when you were a nightly charmed visitor there in your barefoot days. The ring startles you and brings you back to earth once more; connects you up with your city by close ties and the million miles has dwindled to paltry proportions again.

The fact that none of the crowd about the store seem to consider the ringing telephone as an extraordinary affair shows that they are well used to it, and when the storekeeper answers it and thereafter informs one of the crowd that he "is to take home a package of 'east' cakes," you realize that the old isolation has vanished never to return.

Perhaps you make a few inquiries as to how the service is and what the cost amounts to. You may even try it yourself before you go back to your city home and find, contrary to your expectations, that the central girl is prompt and the transmission remarkably clear.

No noises bother the line such as you

"What's the Use," They Would Say, "The Company Hides the Profits."

are used to in the city, where it always sounds as though some trolley car is just starting up when ever you try to get a connection. There may be a few clicks on a rural line, and you may detect a noise as if someone was breathing heavily into the transmitter. You may even hear a clock strike or a baby cry on these rural lines, but you get pretty satisfactory service, nevertheless.

You may, on inquiry of the crowd about the store, find that the company furnishing the service is not a soulless corporation which has spread its wire tentacles thus afar from the great city to such a succulent sustenance in return for a scanty service, but a home affair in which some of your old-time friends are interested.

The rates surprise you and you wonder how service can be given over a scattered community for such a price. It may make you think that the fat rates you pay in the city are out of all proportion as to cost with their value. Perhaps, if you are at all curious, you inquire further and find that your conjecture as to there being any profit in such a business for the local stockholders is correct; there is scarcely ever any earned dividends from the rates allowed.

You also find that, outside of stockholders, there seems to be a general and firm-rooted impression among the rest of the people that the telephone company is making a mint of money but will never admit it. It is done "somehow," but just how they do not seem to know.

You ask if it would not be possible to find out by looking over the books. Bless

your poor trusting heart, they would not believe the books even if they could inspect them intelligently. What's the use, they would say, "they hide the profits." As to the stockholders, they have long ago given up the fight to convince their neighbors that they are not making big profits and, in most cases, none at all.

The crowd around the stove begins to change its appearance in your eyes in some unaccountable manner and divide itself in your esteem into two classes. Unconsciously you begin to have a more friendly feeling to those whom you see are really trying to help the community by having their money in its telephone utility and taking the odium which attaches, without open complaint, and to dislike those harping critics who are willing to accept all good things which come their way, unhelped by an effort of theirs. Instead of a friendly recognition of their debt of appreciation, they pay back with the spurious coin of suspicion and distrust, if not open and unsupported condemnation.

Alas, you recognize you are at home after all; that though you may be many miles from your usual haunts, you are among humans of your own tribe. To you, these classes of people who would distrust and disqualify those nobler efforts of those who seek to serve and build up, seem little short of monstrous —that is, until you begin to take stock of yourself as you ride back to the city and find in your self-analysis that you have perhaps played a star role yourself sometimes in your denunciations of the service and systems of those great, grasping, soulless corporations in the city who furnish you with telephones, gas, electricity, transportation or water.

Somehow you never have thought before that maybe they were in much the same position as the small telephone companies; that maybe when they invited you to look at their books, you winked the other eye and said: "What's the use; they would have things fixed to support their plea of poverty, anyhow." When they asked you to observe the price below par their stock was selling at, as evidence, you wisely came back with "watered stock" and thought you were making a hit as a wisenheimer.

By and by you begin to try for some justification of your action and have pretty poor success generally. The farther you get from the little old home town again, the softer grow the outlines and distinctions as between the different cliques of people which a close inspection had begun to set up in your mind.

You say that, after all, poor devils, they are only human and going according to their light. Then, as the train clatters into the smoky trainshed of the big city, you find the outlines of the old home town again growing dim and delightful and its different personalities no longer stand out in sharp contrast but merge into one big family again and assume their proper and lovable proportions as the "folks in the old home town; God bless them."

APHORISM: A wise peacock faces the crowd.

Commissions, Courts and Councils

Discussion and Rulings of State Bodies Having Supervision Over Telephone Companies—Decisions of Courts in Matters of Interest to Public Utilities and Actions of City Councils Relative to Franchise, Rates and Service

Nebraska Commission Holds Hearing at Bloomfield

Railway Commissioners Taylor and Browne of the Nebraska commission invaded the strike territory at Bloomfield during the week of December 12. They held a hearing on the application of the Union Telephone Company, of Wausa, for "just and reasonable rates for the Bloomfield exchange," and drew an audience of 1,000 persons. It was necessary to use first the city hall and then the opera house in order to accommodate those who came. Two days and evenings were devoted to the hearing.

The commissioners were given a cordial and good-natured reception, but they were impressed with the stubbornness of attitude of most of the strikers, and are rather dubious of the return to the company of any considerable number of them unless they are conceded what they have been fighting for all along, a reduction to the old pre-war rates, which existed at this exchange up until April 1 last. They found the community made up largely of Germans, and the sentiment of the few who spoke was that their terms must be met.

That section of the state was the centre of a great deal of land speculation in the early part of 1920, and many farmers stand to lose their land because of their inability to meet mortgage payments. It is also a one-crop country—corn—and while the yield is large, the price is less than the cost to raise it. These unfortunate circumstances have combined to induce a state of mind that demands the telephone company run at a loss also.

A. C. Grace, local manager of the company, testified that the company had 680 subscribers before the strike was begun, that practically all of these cut connections at the same time, thus forcing the exchange to close. Since it was reopened in August, 70 subscribers have returned. The company expects that a considerable number, in addition, will come back even though the commission continues the present rates.

The Bloomfield delegation put in no evidence to contradict the showing of the company that it had lost $6,000 since April at the Bloomfield exchange. Their spokesman told the commissioners that they supposed that as they were on a strike they were not to be heard, but on invitation a committee was named. W. D. Funk, a lawyer, presented the case, which was in essence a demand for the reinstatement of the old rates. He offered to take a standing vote on the proposition of whether to accept the rates, but the commissioners declined on the ground that they were not fixing rates by a popular vote.

A farmer and stockman who was called said he had lost as much as the company had, and saw no reason why it should not take its losses along with others. He did not appear to be moved by the presentation of the fact that the company is always restricted to a stipulated return and that the law concedes that it has the right to this return at all times, whereas he was free to take in big profits when farm produce was at top prices. He replied that he did not believe he could afford a telephone even at the old rates.

Ray Satterlee, another farmer, recited the woes of agriculture, and wound up by saying that "we are driving lumber wagons, can't afford the price of gas." To which Commissioner Browne dryly replied: "Yes, we noticed that; they were parked rather thickly as we drove into town." This raised a hearty laugh, as the streets were parked full of cars of men who had driven in to protest against a 25-cent increase per month in their telephone rentals.

A delegation was present from Crofton to protest against the possibility of establishing a metallic rate for that kind of service. They said they were satisfied with their present service, and didn't want to pay for a better one.

F. E. Anderson, editor and ex-legislator, presented a protest from Wausa against the figures of the company showing a loss under the increased rates. He claimed that depreciation should be credited as a part of the return, and was nonplussed when shown that it is a trust fund to be used for replacement in the future. He asked a reduction of the switching rate from 50 cents to 40 cents, as spokesman for 31 farm lines. He made the point that the company had charged

the entire coal bill for the year to the last six months of operation, and when this was distributed over the year, it showed Wausa exchange operating at a profit.

The commission took the case under advisement.

Los Angeles Company Gives Increase After Five Years.

After operating for five years under an agreement not to apply for an increase in rates, the Southern California Telephone Co., Los Angeles, formed to consolidate competing systems in that city, was authorized by the California Railroad Commission in a decision announced December 15 to put into effect a new rate schedule giving the company approximately half of the increase requested.

The company proposed a rate of $12 a month for business telephones and was allowed $9. For single-party residence telephones, the company asked a rate of $4.25 and was granted $3.75. The pre-war rates under which the company has been operating are $6.25 for business and $2.50 for residence service. The new schedule is effective January 1.

In arriving at the new rate schedule the commission allowed a rate base of $23,800,000 on an estimate of 170,300 subscribers by June 1, 1922. The company has submitted various estimates of value which, when brought down to date, ranged from $34,000,000 to in excess of $55,000,000.

The company's claim of $1,428,000 depreciation allowance under operating expense account was reduced to $780,000, while the annual charge paid as license revenue to the American Telephone & Telegraph Co. was cut from $217,000 to $120,000. The latter figure was the amount reached both by the city and the commission. While the Southern company is under contract to pay the larger sum, the decision provides that whatever is paid above $120,000 must come out of net income.

The commission did not require the company to make any change either in accounting or rate of depreciation, but in its order did provide that only $780,000 would be allowed in the estimate of operating account for rate-fixing purposes. Any excess amount set up by the company cannot be charged to the rate-payers, but must come out of what would be a fair return to the company.

Discussing the return under the new schedule, the commission says:

"With an estimated revenue of $8,300,000 and total estimated expense of $7,094,000, there remains a net return of $1,206,000. This is equal to approximately 6 per cent on the rate base allowed. We consider such a return reasonable and entirely fair to the company in view of all the circumstances in this case."

The apportionment of toll revenues and expenses between the Southern company and the Pacific company was reserved for decision in the pending state-wide telephone rate case.

Referring to the inter-relation of these companies, the decision points out that all the outstanding stock of the Southern company is owned by the Pacific company, which in turn is controlled by the American company through majority stock ownership.

With the increase granted, the commission insists on improvement in service conditions. "Means must be found," it says, "to meet more promptly and more satisfactorily than in the past the demand for new telephones that is bound to continue at a rapid rate in Los Angeles."

Commenting on service conditions, the decision says:

"The commission's telephone engineers, in conjunction with the engineers of the Board of Public Utilities of the city of Los Angeles, made an analysis, of the company's records of service observations and of trouble records. In addition, an independent service test was conducted by these engineers.

"The analysis of the company's own records led to the conclusion: That the management is making satisfactory efforts to give good service, but that the number of troubles reported is excessive; that the actual trouble is not cleared with sufficient promptness; and that the investigation of a considerable portion of the troubles is not carried far enough to determine and eliminate the condition occasioning the report.

"The independent service tests led to the conclusion that the plant and equipment is not being maintained in such condition as to provide good service, and that a larger number of better trained employes is required for the proper maintenance of the plant.

"Since these conclusions were reached, the company has made arrangements, upon the commission's suggestion to increase its maintenance and construction forces and we believe an improved service may confidently be expected."

In support of its claim for increased rates, the company said that its agreement when it absorbed the Home and Pacific systems in Los Angeles, forced it to go through the war period without the relief other utilities had received. It avers that if it had not been for the credit and resources of the Pacific company, it could not have carried forward its business. Notwithstanding, the company declared that it had taken care of the heaviest growth ever recorded in the telephone history of the territory served.

In reviewing the telephone situation in Los Angeles, the commission declared the remarkable growth of the city was a factor that must be given consideration, saying:

"We cannot be unmindful of the fact that unprecedented growth of the city of Los Angeles in building activity and population, and in expansion of all sorts of business enterprises has created an equally unprecedented demand for telephones. We see no indication justifying a belief that this growth will be retarded or come to a pause in the next number of years. On the contrary, in our judgment, the indications are that this remarkable development will continue and the conditions which have been designated as abnormal in this proceeding may, for some considerable time to come, prove the normal condition of Los Angeles."

Bell Asks to Continue Present Rates in Louisville, Ky.

Repeal of its pre-war rate ordinance prior to January 1, 1922, was requested by the Cumberland Telephone & Telegraph Co. of Louisville, Ky., late last month in a letter sent to Mayor Huston Quinn by General Manager D. F. Trumbull, according to newspaper reports. Unless the ordinance is repealed before January 1, the company says it will be forced to go back to its pre-war schedule.

It is said to be seeking a new ordinance which will enable it to continue to charge its present rates, for the ordinance fixing present rates, which was passed by the lower board of the general council over a year ago, expires December 31. Mayor Quinn took matter under advisement.

Present rates of the Cumberland company are: Business, $7 per month; residence, individual line, $3.50 per month; and residence, two-party lines, $2.50 per month.

Temporary Rates at Wright City, Mo., Made Permanent.

In a supplemental order issued December 5 by the Missouri Public Service Commission the schedule of rates allowed the Wright City Telephone Co., of Wright City, on April 30, 1919, for a temporary period of 13 months and continued from time to time by orders of the commission for further temporary periods, ending January 1, 1922, are made permanent, with the exception of the rate for Class A rural line service.

The net rate allowed for this class of service was $6 per annum, but in the future a discount of 10 cents per month will be allowed when payment is made during the first month in the quarter at the company's office, thus reducing this rate to $4.80 per annum.

Michigan State Offers to Purchase Valley Home for $1,250,000.

Negotiations for the purchase of the Valley Home Telephone Co., operating telephone lines in Bay City and Saginaw, Mich., as well as in a number of smaller towns throughout the central part of the state, by the Michigan State Telephone Co., the Bell system, have reached the stage where a definite contract agreement,

prepared and signed by the Bell company, has been approved by Valley Home directors, according to Roy F. Mapes, general manager of the Independent company.

The price offered is $1,250,000, which is the valuation placed upon the properties by the public utilities commission in an appraisal made several months ago.

Completion of the sale is dependent on several factors. One is the approval of the sale by the utilities commission, another the approval of the stockholders of the Valley Home company, and then final submission to the Interstate Commerce Commission, after the purchase has been approved by 75 per cent of the Valley Home stockholders, should they decide to sell.

Still another condition is the rate question. Under the terms of the agreement proposed, the Bell company says it will not purchase the property unless the utilities commission allows it to charge a rate for the combined service that it feels will enable it to operate the consolidated properties. No public announcement of the rates desired has as yet been made.

The contract is the result of months of conferences. Consolidation of the two properties, or at least provision of a physical connection, has been sought at various times by city officials and local organizations, and the directors of the Board of Commerce a short time ago approved the proposed sale.

Whether or not the Valley stockholders will approve the proposed contract is not yet known, but according to a statement by General Manager Mapes, even if they do approve it as speedily as possible, the negotiations with the utilities commission and the Interstate Commerce Commission probably will take at least a year, so that actual consolidation of the systems is not likely before January 1, 1923.

Plan to Merge Michigan State and Citizens Companies.

Plans for the unification of telephone service in Lansing and the whole central and western part of Michigan, where the Michigan State and the Citizens Telephone companies now operate, were taken up at a recent conference called by the state public utilities commission between officials of the two telephone companies and the commission. It is expected that a satisfactory distribution of territory will be agreed upon in time for presentation to the commission at another conference to be held January 3.

This plan has been under consideration for more than three years and was understood to have been agreed to by both parties several months ago. It was planned to have the Michigan State take over all of the Citizens' exchanges outside a circle centering in Grand Rapids, while the Citizens company was to have a monopoly in Grand Rapids and contiguous territory.

Approximately $600,000 was to have been paid by the Bell company for the difference between the value of the properties it was to have surrendered in Grand Rapids and adjacent territory and that to have been surrendered by the Citizens company in territory ceded to the Michigan State.

The plan fell through, however, when Congress passed the bill permitting companies to purchase their competitors plants by obtaining approval of the Interstate Commerce Commission after consent has been obtained from state or municipal authorities, without violation of the anti-trust law. The Michigan State then announced that it would not surrender its own exchanges under any agreement, but would buy the Citizens' properties outright, which offer was immediately declined.

If no agreement is reached in the present conferences, it is understood the commission will proceed to hear cases now pending in which various cities have asked for physical connection between the lines of these companies and that it will probably order such connections made.

Denies Higher Rates Pending Unification of Service.

Telephone rates will not be higher in Sandusky, Ohio, until the unification of the Ohio Bell and the Sandusky Home Telephone properties there is complete, according to an order handed down early this month by the state public utilities commission.

Merger of the Bell and the Sandusky properties was approved by the commission early last spring and the matter is now before the Interstate Commerce Commission. At that time the commission announced its intention of preventing the raising of rates pending unification of service. The company then sought a rehearing and asked for higher rates. This request has again been refused, but a schedule of rates to be charged under the unified service has been completed.

It provides for a charge of $7.50 per month for individual business lines and $6 for two-party business lines; $2.75 for individual residence, $2.50 for two-party and $2 for four-party service. Rural service is to be given at $2.

Propose Telephone Rate Increase in Pe Ell, Wash.

Notice of a proposed increase in telephone rates by the Farmers Telephone Co., of Pe Ell, Wash., has been sent to the state public service commission, according to newspaper reports. The increases are said to average about 33⅓ per cent and are to become effective January 1, 1922.

Under the new tariff, the following rates will be charged: Single party business lines, $2.25 per month; two-party lines, $2 per month; four-party, $1.75 per month; single party residence lines, $2 per month; two-party lines, $1.75 per month; and four-party, $1.50 per month. A switching fee of $7 per year for farmer lines where the users own their own telephones is also provided.

Capital Stock Issue by Almond (Wis.) Company Approved.

Permission was granted the Almond Telephone Co., of Almond, to issue $8,675 of its capital stock by the Wisconsin Railroad Commission on December 7 for the purpose of bringing the total of its outstanding stock, bonds, notes, and other evidences of indebtedness more nearly to an equality with the value of its property.

The commission found that the value of the property of the company on November 15, 1921, was at least $17,000.

Authorized to Discontinue Exchange and to Raise Rates.

On December 3, the Wisconsin Railroad Commission authorized the Rice Lake & Northeastern Telephone Co. to increase its rates from $12 per year to $6 gross, $5.25 net per quarter, with the usual 25 cents per month discount for prompt payment of bills. These rates are effective for service rendered on and after January 1, 1922.

The company is a rural telephone utility furnishing service to about 100 subscribers on five circuits having a pole line mileage of 57 miles and a wire line mileage of 107 miles. At the present time the company operates an exchange at Lake but on account of the high expense of operating this exchange for 100 subscribers it requested and received authority from the commission to discontinue this exchange and to run the five circuits into the exchange of the Barron County Telephone Co., at Rice Lake, a distance of eight and one-half miles.

Summary of Commission Rulings and Schedule of Hearings.

CALIFORNIA.

December 9: New schedule of rates designed to eliminate discriminations ordered for the Central Telephone Co. at Exeter. Service improvements and a new accounting system in accordance with the rules of the commission also ordered.

December 15: Order issued allowing an increase in rates to the Southern California Telephone Co. at Los Angeles. The rates are approximately one-half of the increase asked by the company. Under the agreement by which the two systems in Los Angeles were merged, the Southern California company was bound not to ask for an increase until a period of five years had elapsed.

December 16: Petition filed by L. E. Dean, owner of a farmer telephone line extending from Plymouth to Fairplay for authority to increase the present uniform rate of $1 a month to $1.50 for residence and $2 for business service.

FLORIDA.

December 8: Hearing at Tallahassee on application of the Southern Bell Telephone & Telegraph Co. for authority to increase its rates throughout the state.

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Protests filed by the cities of Jacksonville and Pensacola.

December 8: Increased rates granted the Florida Telephone Co. for telephone service at Jasper, Branford, Mayo, Live Oak, Wellborn, Jennings, and O'Brien, effective January 1.

ILLINOIS.

November 17: Order issued permanently cancelling proposed advance in rates for the Maritan Switchboard & Telephone Co. at its Maritan exchange.

December 6: The LaHarpe Telephone Co. authorized to file a schedule of toll rates for service at LaHarpe, effective December 19, under certain conditions specified in the order.

December 6: Order issued permanently suspending rate schedule IPUC 2 of the Mississippi Valley Telephone Co. on file with the commission for toll service between certain exchanges of the company and authorizing the company to place in effect rate schedule IPUC 3, effective as of December 1. Agreement dated January 30, 1920, between the Mississippi Valley company and the Burnside Telephone Exchange also approved.

December 7: Petition of the Garrison Mutual Telephone Co. for a certificate of convenience and necessity to operate a telephone line dismissed, the commission finding that the company is a mutual concern and that it is therefore not under its jurisdiction.

December 7: Permission granted the McNabb Mutual Telephone Co. to place in effect certain increased rates for telephone service in the village of McNabb, effective as of December 1. The company was also directed to set aside $796 per annum for depreciation.

December 8: Applications filed by the Illinois Bell Telephone Co. for rehearing of order issued October 31, 1921, denying increased rates for telephone service in Beardstown, Alton, Wood River, Sterling, Rock Falls, Momence, and Edwardsville and vicinities, denied.

December 20: Hearing at Springfield on application of the Illinois Bell Telephone Co. for authority to increase toll rates as shown in revised sheets No. 3 to 15 incl. of schedule IPUC 1.

December 21: Hearing at Springfield in the matter of application of the Murphysboro Telephone Co. for authority to increase rates in Murphysboro and 23 other municipalities; protest filed by mayor and citizens of Carbondale against rates and service of the company; protest filed by city of Anna against service of company at Anna; supplemental application filed by the Murphysboro company for an extension of time within which to comply with the order of the commission.

December 21: In the matter of proposed increases in rates for telephone service in Winchester by the Scott County Telephone Co.; ordered that case be reopened and set for further hearing on this date.

January 4: In the matter of proposed increases in rates for telephone service by the Mahomet Telephone Co. at Mahomet; ordered that case be reopened and set for further hearing on this date.

January 11: Hearing at Chicago on citation order entered ordering the Illinois Bell Telephone Co. to show cause why its rates for telephone service in Chicago and such adjacent territory as constitutes the Chicago exchange should not be reduced, postponed to this date.

MARYLAND.

December 16: Hearing at Baltimore on petition of the Chesapeake & Potomac Telephone Co. for authority to continue its present schedule of rates after December 31 when they will automatically expire.

MINNESOTA.

January 10: Hearing at Lockhart on application of the Lockhart Telephone Co. for authority to increase rural rates at Lockhart.

MISSOURI.

December 7: The Warrenton Telephone Co., of Warrenton, granted authority to file a new schedule of rates. Free service to the Bain-Gerdeman Farmers Telephone Co. ordered discontinued where calls are made by it through Warrenton to other connecting companies. A toll charge of 10 cents for such calls was approved.

NEBRASKA.

December 12-13: Hearing at Bloomfield of application of Union Telephone Co. of Wausa for just and reasonable rates to supplant present schedule expiring December 31, 1921; following showing by company of financial results of operation, committees were heard from Wausa, Crofton and Bloomfield, in opposition to any rate increase; cause submitted.

December 13: In the matter of the application of the Lincoln Telephone & Telegraph Co. for increased rates at Fairbury exchange and of farm rates at Wahoo exchange; it appearing these have been covered in recent orders, dismissal ordered of record.

December 13: In the matter of the application of the Amherst Telephone Co. for permission to make certain service connection charges; they having been covered in general service connection charges schedule and order, dismissal ordered of record.

December 14: In the matter of the application of the Jack Morrow Flats Telephone Co., of North Platte, for authority to make certain reorganization changes; the supreme court having held that this commission is without authority over mutual telephone companies, and this being a purely mutual having no non-stockholder subscribers, dismissal ordered of record.

December 15: Application filed by the Northwestern Bell Telephone Co. for permission to group its various exchanges and make standard rates applicable within each of the groups, and for permission to continue in effect the present schedule of charges, with a 10 per cent surcharge, until such application is heard.

December 16: Application of the St. Bernard Telephone Co. for permission to establish increased schedule of rates dismissed for want of prosecution.

December 16: Application filed by the Lincoln Telephone & Telegraph Co. for permission to continue indefinitely its present schedule of rates.

December 16: Application of the Scotia Independent Telephone Co. for permission to establish an increased schedule of rates dismissed for want of prosecution.

December 16: Complaint filed by W. H. Dowling, manager of Tryon Telephone Co., setting up that R. E. Loudon, owner of Tri-County Telephone Co. at Stapleton, has notified him that he will quit furnishing service January 1, and asking that he be prevented from doing so, as such action will cut his town off from connection with its only railroad town.

December 16: Application of the Milburn & Anselmo Telephone Co. for permission to issue additional stock for the purpose of building new toll facilities dismissed for want of prosecution.

December 17: Application filed by the Swanton Mutual Telephone Co. to establish a rate for depot service.

December 17: Application filed by the Citizens Telephone Co., of Paxton, asking for authority to establish a non-subscriber rate.

NEW MEXICO.

January 16: Rehearing at Santa Fe of the Mountain States Telephone & Telegraph Co. rate case, hearings on which were begun early in October. The company is said to have agreed to reimburse subscribers in the event of an adverse decision.

NEW YORK.

December 3: Complaint of the Harrisville Chamber of Commerce against the Northwestern Telephone Corp. over poor service, dismissed, following improvements in the company's service.

December 15: New tariff of rates proposed as effective January 1, filed by the Red Hook Telephone Co. for its Red Hook, Rhinebeck, and Staatsburg central office districts.

December 20: Hearing at Albany on motion of the commission as to rates, charges and rentals, and the regulations and practices affecting rates, charges and rentals of the New York Telephone Co.

NORTH DAKOTA.

December 12: Permission given the Home Improvement Co., of Crystal, to file a service switching station rate of 40 cents per station per month.

December 12: The McLeod Telephone Co., of McLeod, granted authority to issue two shares of additional capital stock.

December 19: Authority given the Litchville Rural Telephone Co. to reduce rates at Litchville.

December 19: Hearing at Linton on application of the Dakota Central Telephone Co. for authority to increase rates at Linton.

December 21: Hearing at Ruso on application of the Strawberry Lake Telephone Co. for authority to discontinue exchange service at Ruso.

December 22: Hearing at Bergen on application of the Farmers Co-operative Telephone Co. for authority to discontinue its exchange at Bergen.

OHIO.

December 3: Increased rates asked for by the Ohio Bell Telephone Co. for telephone service at Sandusky, denied, pending unification of the Ohio Bell and Sandusky Home Telephone properties there. Schedule of rates to be charged after merger is complete outlined.

WASHINGTON.

December 6: New tariff of rates filed by the Farmers Telephone Co., proposed as effective January 1 in Pe Ell.

WISCONSIN.

December 21: Rehearing at Madison on the application of the Babcock Telephone Co., of Babcock, for authority to increase its rates. U-2493.

December 12: Application filed by the La Crosse Telephone Co., of La Crosse, for authority to issue $10,000 of its capital stock for the purpose of bringing the total of its outstanding securities more nearly equal with the value of its property. SB-1729.

December 14: Notice filed by the Wisconsin Telephone Co., pursuant to the provisions of Chapter 610, Laws of 1913, of a proposed extension of its lines in the town of Washington, Eau Claire county. T-1034.

December 14: Application filed by the Clinton Telephone Co., of Clinton, for authority to increase its rates. U-2623.

December 14: Application filed by the Sheboygan Falls Rural Telephone Co., of Sheboygan Falls, for authority to issue $250 of its capital stock for the purpose of paying for additions and extensions to its property and plant.

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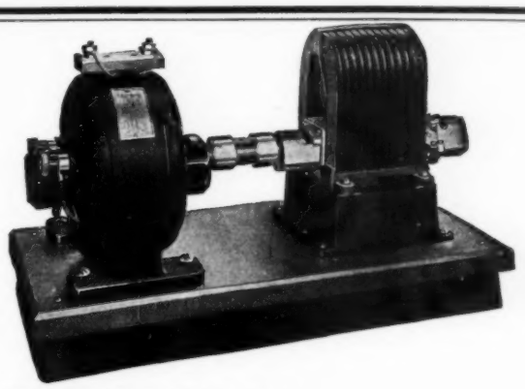

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Personal and Biographical Notes

Howard O. Leinard, former general manager of the Ohio State Telephone Co., Columbus, Ohio, is now division manager of the Ohio State division of the Ohio Bell Telephone Co. with head-

Howard O. Leinard as Division Manager of the Ohio State Unit of the Ohio Bell Company Has Headquarters in Cleveland.

quarters in the "4300 Building," Euclid Ave., Cleveland, Ohio.

"H. O." began his telephone career as a timekeeper for the United States Telephone Co. in Cleveland, January 1, 1906. Two months later he was made clerk in the purchasing department; eight months later he became purchasing agent.

About that time the United States Telephone Co., a long distance service, was consolidated with the Cuyahoga Telephone Co. Under the consolidation Mr. Leinard became special representative to the general auditor. Four months later he was made purchasing agent of United States and Cuyahoga properties. When these companies were each given a distinct organization, he continued his services with the Cuyahoga company as purchasing agent until 1910. In February of that year he was made treasurer, and two years later secretary.

In July, 1914, the Cuyahoga Telephone Co. became the Ohio State Telephone Co. In this new and larger organization Mr. Leinard was made assistant treasurer and commercial superintendent, in charge of the accounting and commercial departments. Then on May 1, 1917, he was made Cleveland manager.

On July 1, 1918, "H. O." became general manager for the Ohio State system with headquarters at Columbus, Ohio, and continued in that position until appointed division manager of the Ohio State division of the Ohio Bell company following the recent consolidation.

Mr. and Mrs. M. R. Yirak, who have been managers of the Springfield (Neb.) telephone exchange for the past six years, have removed to Gretna, Neb., to take up the work there, where Mr. Yirak becomes manager. During their stay in Springfield, Mr. Yirak was called to overseas service. His wife pluckily volunteered for the job as manager, and held it down until her husband had returned.

Obituary.

Orville F. Berry, president and general manager of the Mississippi Valley Telephone Co., of Carthage, Ill., since its organization, passed away suddenly December 19 in a Jacksonville hospital at the age of 69 years.

Mr. Berry was prominent in the political, social and business life of Illinois for a great many years, being elected to the Illinois state senate in 1889 and serving in the upper house for 20 years, with the exception of two years. During his senatorial service (from 1896 to 1908) Senator Berry presided over Republican state conventions, and under Governor Tanner's administration was chairman of a committee appointed to investigate the Chicago police and justice systems which resulted in the establishment of the present municipal court system. He acted also as general attorney for the insurance department of Illinois.

Under Governor Altgeld's administration he was chairman of a committee appointed to investigate the defalcation of the treasurer of the state university. From 1908 to 1913 Senator Berry was chairman of the Illinois Railroad & Warehouse Commission and during 1913-1914 served as special examining attorney for the Interstate Commerce Commission.

He had been active in the state telephone association's work, having been the association's general counsel for a number of years and taking an active part in all its affairs.

Senator Berry did not neglect the smaller services in his own community, for he had the distinction of being the first mayor of the city of Carthage serving six years consecutively and four years later, making a ten-year period as mayor.

In 1904 he organized the Mississippi Valley Telephone Co. with $25,000 capital stock, later increased to $100,000. This company now operates at Carthage, Warsaw, Hamilton, Dallas City, and has a number of smaller exchanges throughou Hancock county.

In 1910 he purchased the Independent Telephone & Telegraph Co., of Nauvoo, Ill., now operated in conjunction with the Mississippi Valley company, and at the organization of the latter company was elected president and general manager, continuing in that capacity until his death.

Table Grove, Ill., was Mr. Berry's birthplace, the date being February 10, 1852. After working on a farm until of age, he moved to Carthage in 1876 and studied law. He was admitted to the bar in January, 1879, and a few years later engaged in law practice with T. C. Sharp under the firm name of Sharp & Berry. Later his brother, M. P. Berry, entered the firm and the name was changed to Sharp & Berry Brothers.

Senator Berry was a member of the Masonic fraternity, a Knight Templar, an Odd Fellow, a Knight of Pythias, a Modern Woodman, and a member of the Hamilton Club of Chicago. He was also president of the Dime Savings Bank of Carthage. His wife, one daughter, a brother, and two grandchildren survive.

It is not saying too much to state that Senator Berry through his political, social and business relations was one of the most popular, likeable and prominent men in Illinois. His influence was especially noticeable in the development of the tremendous telephone industry of the state, and there is not a telephone execu-

The Late Orville F. Berry, of Carthage, Ill., Was Most Active in Illinois Affairs.

tive in Illinois who will not be deeply grieved to learn of his death. A man of pleasing personality, highest legal attainments and remarkable business ability, his death will leave its impress on many fields of activity for a long time to come.